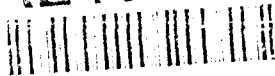


**ST. LOUIS DISTRICT CULTURAL RESOURCE  
MANAGEMENT REPORT NUMBER 28**

AD-A246 054



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**Phase I and Phase II Archaeological Investigations  
in Conjunction with the Shoreline Erosion Study,  
D.M. No. 14, Carlyle Lake, Illinois**

**CONTRACT NO. DACW43-84-D-0085**

by Michael W. Sirico

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With contributions by William M. Cremin and Carl R. Falk

Michael J. McNerney  
Principal Investigator

American Resources Group, Ltd.  
Carbondale, Illinois

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**JANUARY 1986**

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Phase II testing was conducted at five prehistoric archaeological sites. One site, Illinois Archaeological Survey No. 11CT385, contained subsurface Late Woodland features. One of these produced a radiocarbon age of  $1090 \pm 60$  years, A.D.  $860 \pm 60$ , in association with Late Woodland ceramics similar to Early Bluff or Raymond materials.

An appendix by William M. Cremin details the botanical remains recovered, while another by Carl R. Falk summarizes the faunal remains.

Analyses of all recovered materials are provided along with potential National Register of Historic Places eligibility recommendations for the tested sites.

ST. LOUIS DISTRICT CULTURAL RESOURCE

MANAGEMENT REPORT NUMBER 28

Phase I and Phase II Archaeological Investigations  
In Conjunction with the Shoreline Erosion Study,  
Design Memorandum No. 14,  
Carlyle Lake, Illinois



By

American Resources Group, Ltd.  
Carbondale, Illinois

Michael W. Sirico  
Author

with contributions by William M. Cremin  
and Carl R. Falk

Michael J. McNerney  
Principal Investigator

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## ABSTRACT

→ This volume reports on the 1985 Phase I and Phase II archaeological investigations conducted for the St. Louis District, Corps of Engineers in conjunction with the Shoreline Erosion Study, D.M. No. 14, at Carlyle Lake, Clinton County, Illinois.

Phase I pedestrian survey and shovel testing covered approximately 41 acres, encompassing over 18 separate tracts, and resulted in the location of 13 prehistoric archaeological sites, 5 of which were previously recorded. In addition, 22 isolated find locales produced 19 unknown prehistoric components and 4 historic components.

Phase II testing was conducted at five prehistoric archaeological sites. One site, Illinois Archaeological Survey No. 11CT385, contained subsurface Late Woodland features. One of these produced a radiocarbon age of  $1090 \pm 60$  years, A.D.  $860 \pm 60$ , in association with Late Woodland ceramics similar to Early Bluff or Raymond materials.

An appendix by William M. Cremin details the botanical remains recovered, while another by Carl R. Falk summarizes the faunal remains.

Analyses of all recovered materials are provided along with potential National Register of Historic Places eligibility recommendations for the tested sites. ←

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## CHAPTER 1: INTRODUCTION

### General Project Description

Phase I and Phase II archaeological investigations were conducted in Clinton County, southcentral Illinois, between April 23, 1985 and September 17, 1985 (Figure 1). Work was carried out by American Resources Group, Ltd. The general project area was located along the periphery of Carlyle Lake north of the town of Carlyle. Phase I (Contract No. DACW43-84-0085, Delivery Order No. 4) was conducted within 18 designated tracts around the lake (Appendix A: Figures 1-3). Phase II (Contract No. DACW43-84-0085, Delivery Order No. 6) was implemented at five archaeological sites, two of which were located outside of the Phase I tracts (Appendix A: Figures 5-7).

This project was initiated by the U. S. Army Corps of Engineers (COE), St. Louis District, in compliance with Design Memorandum No. 14 (U. S. Army Corps of Engineers 1980) and the National Historic Preservation Act.

Primary Phase I requirements in the Scope of Work (Delivery Order No. 4) were:

1. review of the National Register of Historic Places (NRHP) and of Illinois State Historic Preservation Office (SHPO) records to determine what recorded cultural properties exist within the project area.
2. a 100% pedestrian survey within 18 designated tracts in order to determine the number and extent of cultural properties visible at the ground surface.
3. a random surface collection of diagnostic artifacts at each archaeological site.
4. shovel testing within designated tracts in order to determine if cultural materials, features, or buried soil horizons exist below ground surface.
5. the recording of all archaeological sites on Illinois Archaeological Survey forms.
6. the analysis of recovered artifacts.
7. submittal of a survey report.

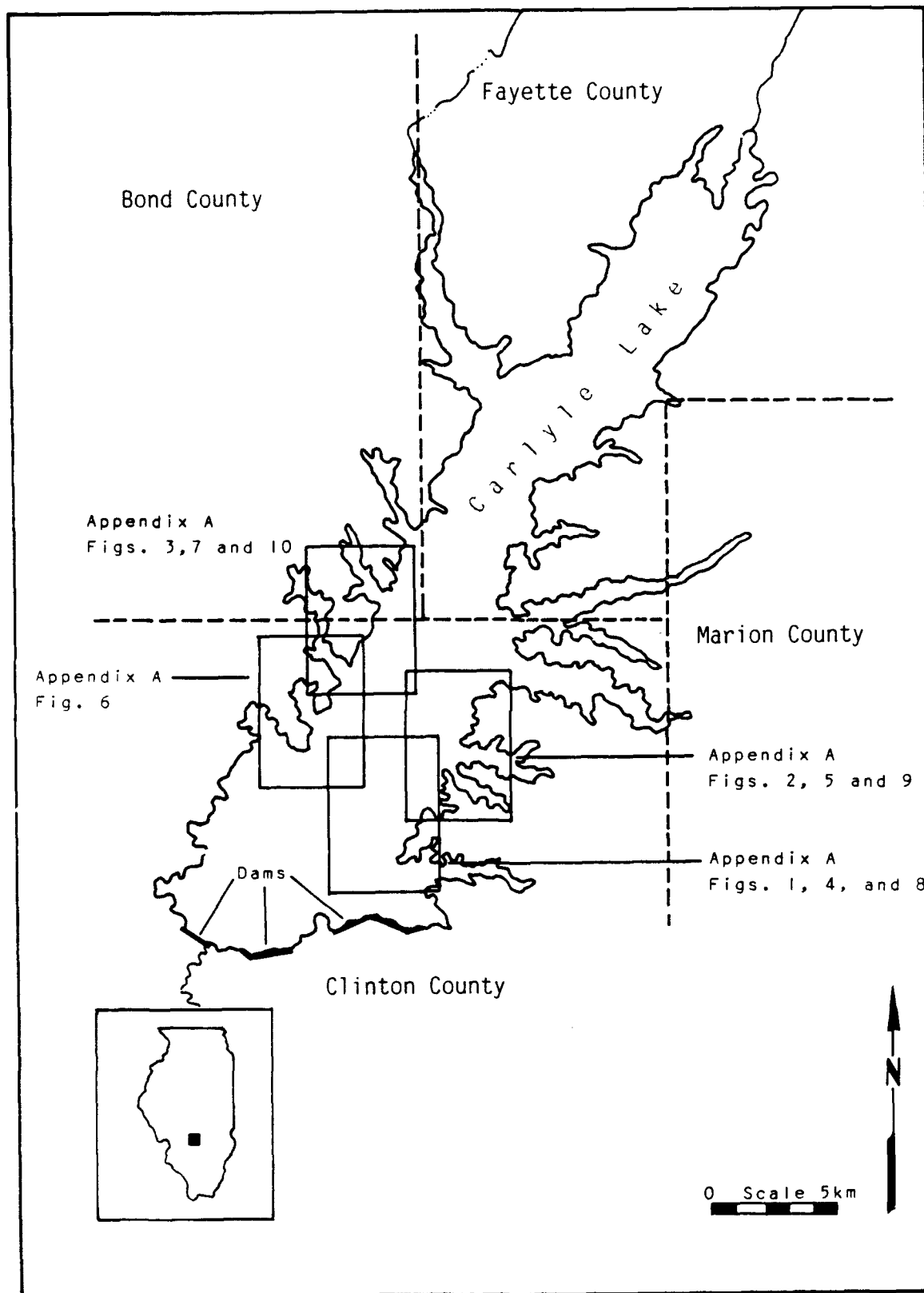


Figure 1. Project Location

Primary Phase II requirements in the Scope of Work (Delivery Order No. 6) were:

1. evaluative test excavations at five designated archaeological sites.
2. analysis of recovered archaeological materials.
3. preparation of a contour map and placement of a survey monument at each archaeological site deemed eligible for the NRHP by the COE representative.
4. submittal of a draft and final report. This was to include assessments of eligibility for the NRHP. Also to be included was a discussion of project results in relation to previous archaeological investigations within the vicinity of Carlyle Lake and the Middle Kaskaskia River Valley.

#### Project Personnel

Michael J. McNerney served as principal investigator for this project. The report author was supervising archaeologist, a duty briefly shared with Ronald E. Pulcher. The field crew was composed of Bill Brown, James Burrow, Kathleen Cusick, Jerry Moore, Bart Smith, and Bonnie Swift. Contour mapping was conducted by Mark E. Phillips and Bart Smith.

#### Curation

Materials and records are curated at the Illinois State Museum in Springfield, Illinois, and are marked "Property of the U. S. Government, St. Louis District, Corps of Engineers, Contract #DACW43-84-D-0085, Delivery Orders #4 and #6."

## CHAPTER II: ENVIRONMENTAL SETTING

### Physiography

The project study area is located within the Till Plains section of the Central Lowland province, Springfield Plain area (Willman et al. 1975:Fig. 7, 17). The area has been described by Schwegman as "... nearly level to dissected till plain . . . [with] broad floodplains along the major streams and . . . ravines in the bluffs along the stream valleys (Schwegman 1975:31).

The immediate project area occupies zones of shoreline and ridge spurs around Carlyle Lake, which now covers the former Kaskaskia River floodplain. Other streams in the Carlyle Lake environs include the north and east forks of the Kaskaskia River, Brewster Creek, Gibbs Creek, Coles Creek, and Allen Branch. Water from the lake tends to back up into portions of these stream channels, changing them into "fingers" of the lake itself.

### Geology

The portion of Clinton County within which the project area is located has a Pennsylvanian system bedrock surface belonging to the Bond formation (Willman et al. 1975). Much of the Bond formation is composed of limestone shale and calcareous clay. Siltstone and sandstone also occur as well as several coal members (Hopkins and Simon 1975:196-198).

The surficial geology of Clinton County and surrounding areas is represented by Illinoian glacial drift (mostly till), with loess on top. Alluvial deposits (Cahokia alluvium) of sand, gravel, and silt exist along the Kaskaskia River (Willman et al. 1975:22, Fig. 11).

### Soils

The soils of Clinton County were derived from parent material provided by glacial activity (Norton et al. 1936:7-8). Upland soils within the general area are light in color and well developed, originating from materials covered by forest and prairie flora (Schwegman 1975:31).

The immediate Carlyle Lake project area includes Bluford silt loam and eroded gravelly loam soils. Other soils possibly present include

Sharon silt loam, Wynoose silt loam, Ava silt loam, Cisne silt loam, and Hoyleton silt loam (Norton et al. 1936:survey map of Clinton County).

### Climate

The climate of Illinois is continental, consisting of hot summers and cold winters (Schwegman 1975:5). Clinton County has a humid climate with rather broad variation in temperature from season to season and sporadic rainfall distribution (Norton et al. 1936:5). Norton et al. (1936) provide the following information collected during the period 1914-1932 from an area just north of Clinton County: mean summer temperature 75.6° F; mean winter temperature 34.8° F; highest summer temperature 110° F; lowest winter temperature -20° F; last killing frost (average date) April 20; first killing frost (average date) October 22; average frost-free period 190 days; average yearly rainfall 35.75 inches; minimum yearly rainfall approximately 26 inches; maximum yearly rainfall approximately 47 inches. Drought during the growing season is not uncommon (Norton et al. 1936:5-6).

### Flora

Clinton County is located within the Effingham Plain section of the Southern Till Plain division. Forest and prairie were in existence here when settlers arrived (Schwegman 1975:30, Natural Divisions of Illinois map). Approximately 40% of the uplands in this division had a prairie flora when initially settled. This consisted primarily of mesic tallgrass (Schwegman 1975:31). Only certain portions of the floodplain of the Kaskaskia River supported wet prairie (marshes existed along many floodplains in the Southern Till Plain division) (Schwegman 1975:32). Post oak flatwood forest is present in this division and includes varieties of oak (Quercus) and hickory (Carya) in the uplands. Forested slopes of stream valleys contain certain varieties of oak, ash (Fraxinus), hickory, elm (Ulmus), walnut (Juglans), maple (Acer), and cherry (Prunus). Floodplain forest along major streams includes varieties of elm, oak, hickory, maple, willow (Salix), sycamore (Platanus), ash, and hackberry (Celtis). Forests along floodplains of minor streams include oak, walnut, hickory, birch (Betula), and cottonwood (Populus) (Schwegman 1975:30-31).

### Fauna

Fauna typical of grassland and forest areas such as those in Illinois are numerous. Coyote (Canis latrans), badger (Taxidea taxus), deer (Odocoileus virginianus), raccoon (Procyon lotor), fox squirrel (Sciurus niger), eastern chipmunk (Tamias striatus), and various species of bird and reptile are known (Shelford 1972:23, 335, 336). Fish are abundant in lakes and streams, and avifauna are plentiful. Animals previously typical but no longer present include bison (Bison bison), wolf (Canis niger), mountain lion (Felis concolor), and black bear (Euarctos americanus) (Shelford 1972:23, 335).

### Present-Day Land Use

The project area has undergone considerable change since the impoundment of Carlyle Lake. Agriculture and other rural activities were dominant in the past. Today, the lake and its immediate environment witness recreational activities as well as activities associated with maintenance and operation of the lake. Farming still continues around the perimeter of the lake, and residential areas are not uncommon.



### CHAPTER III: PREVIOUS INVESTIGATIONS

Carlyle Lake and vicinity have undergone considerable archaeological investigation, much of which took place before construction of the dam. The earliest formal archaeological work conducted within Clinton County was by the University of Chicago in 1939, near Boulder (Rackerby 1966:40). Archaeological investigation was initiated within the proposed locale for Carlyle Lake by Southern Illinois University, Carbondale, in 1958. This work, performed under contract with the U. S. Department of the Interior, National Park Service, eventually resulted in the location of 84 sites. Sites were recorded on ridges, upland knolls, and the Kaskaskia floodplain. Tests were conducted on 37 of these sites, and 8 underwent large-scale excavation (Rackerby 1968). One of these excavated sites, Gus Krebs, consisted of a major Middle Woodland component, with Early Woodland through Mississippian occupations represented by surface material (Fowler 1961:7, 16-17). The Texas site was composed of Early Woodland, Middle Woodland, Late Woodland, and Mississippian components (Morrell 1965:59-63). Archaic, Early Woodland, Late Woodland, and Mississippian periods were represented at the Orrell site (Salzer 1963:38). Salzer reported possible Archaic components in addition to Early Woodland, Middle Woodland, and Mississippian components for the Kerwin site (1963:19). The first season at the Boulder site produced evidence of Archaic, possible Early Woodland, Middle Woodland, possible Late Woodland, Mississippian, and historic periods (Rackerby 1966:126-129). Work conducted by Binford (1964:55-56) at the Toothsome site provided evidence of a Mississippian period "farmstead." Investigations by Binford (1964:107-108) at the Galley Pond site produced Middle and Late Archaic materials, a Late Woodland burial, and a Mississippian mortuary structure. Late Woodland and Mississippian structures and features were excavated by Binford at Hatchery West (Binford et al. 1970).

Most sites found during these early investigations were located in eastern areas of the future lake generally between 445 ft and 462 ft above mean sea level, these elevations being characterized by low ridges and knolls rising above the valley floor. Lower-lying areas were swampy or in heavy ground cover. Areas above the 462 ft elevation were outside the focus of early survey work. The majority of archaeological components discovered were Archaic followed by those of Woodland affiliation. Mississippian period components were the least well represented. Paleo-Indian material was sparse but present (Hassen et al. 1984b:6).

Southern Illinois University-Edwardsville surveyed designated portions of Carlyle Lake in 1978 in order to inspect wave erosion damage

to archaeological sites. The survey covered a segment of the east shoreline of the lake, certain fields, and 15 islands. Thirty six sites were found, nine of which had been previously recorded by Southern Illinois University-Carbondale. Seventeen sites produced diagnostic materials assignable to specific cultural components as follows: 1 Early Archaic, 1 Late Archaic, 4 Middle Woodland, 10 Late Woodland, and 8 Mississippian (Hassen et al. 1984b:7).

Field work was carried out at the Grey Day site in 1982-83 by the Center for American Archeology. The site had been subjected to heavy wave erosion. Early Archaic through Mississippian materials were recovered. Six houses, 28 human burials, and 7 pit features were excavated (Hassen et al. 1984a:1, 48).

Pedestrian survey of areas around Carlyle Lake was conducted in 1983 by the Center for American Archeology. The survey area was to consist of shoreline between elevations of 443 ft and 445 ft and 2 cultivated fields near the lake. Because of high water, the survey had to be conducted between the 450-455 ft levels. One area of cultivated fields (overgrown) was excluded from the survey (Hassen et al. 1984b:1, 1). In all, 45 unrecorded sites were found (27 prehistoric, 12 historic, 6 prehistoric/historic). The survey, which included visits to sites already recorded, revealed the presence of Archaic through Mississippian materials, including Oneota (Hassen et al. 1984b:11, 34, 37). Historic materials cover the period from late nineteenth century to middle twentieth century (Hassen et al. 1984b:56).

Testing and excavation was recently conducted at the Bridges site (11-Mr-11) by Southern Illinois University-Carbondale. This site is located southeast of Carlyle Lake within Marion County. Initial testing of the site indicated the presence of Archaic, Late Woodland, and Mississippian components (Hargrave and Butler 1981:58-59). Further excavation has revealed Late Woodland, transitional Late Woodland-Mississippian, and Mississippian components. The latter two components are represented by numerous structures and features (Hargrave et al. 1983).

Overviews covering previous archaeological work in the general Carlyle Lake area may be found in the following publications: Hargrave and Butler 1981; Hargrave et al. 1983; Hassen et al. 1984a; Hassen et al. 1984b; Lopinot et al. 1982; Rackerby 1968.

## CHAPTER IV: PHASE I SURVEY (DELIVERY ORDER NO. 4)

### Introduction

Phase I archaeological investigation was conducted on 18 tracts (approximately 41 acres) bordering Carlyle Lake. Pedestrian survey was carried out over approximately 29 acres of agricultural fields, timber, and residential and camping areas. Approximately 3.5 acres of shoreline were included. Shovel testing was implemented within approximately 8.5 acres of noncultivated land. Field work commenced April 23 and ended April 29, 1985.

### Methodology

Intensive pedestrian survey was performed by personnel walking parallel transects spaced 5 m apart over each designated tract. Ground surface was examined for prehistoric and historic cultural materials and features. Particular attention was given to erosional areas when zones of dense ground cover were encountered. Eroded bank profiles and beaches were inspected for cultural materials and features whenever possible. Random surface collections of diagnostic artifacts were conducted at each archaeological site. Photographs were taken to illustrate field conditions and work in progress.

Shovel testing was conducted at designated tracts to verify presence or absence of subsurface prehistoric and historic cultural materials and features. Shovel tests were made on a 10 m grid where possible. Individual shovel tests were 30 cm in diameter and 45 cm deep. Matrix from every fourth shovel test (where practicable) was screened through 1/4 in. mesh hardware cloth. High moisture and clay content of matrix often made screening difficult or impossible. In such instances, matrix was inspected by trowel sorting without screening. Shovel tests encountering artifacts or features were recorded as positive. Each completed shovel test was backfilled, and transects were flagged.

Isolated artifact find locations and archaeological sites were assigned temporary field numbers. These were later changed to permanent locale and site numbers, respectively.

## Results

Survey results for each tract are presented below. A brief summary of these results is provided at the end of this chapter. Tabulations and analyses of recovered cultural material are provided in Chapter VI.

### Tract 1 (Appendix A:Figure 1)

Pedestrian Survey. A plowed cornfield (1.25 acres) had ground surface visibility of 90-100%. Survey results were negative.

### Tract 2 (Appendix A:Figure 1)

Shovel Test. Here pasture (1.29 acres) had ground surface visibility of 0-30%. A dry slough within the west half of the tract had ground surface visibility of 70%. Negative results were produced by subsurface testing (Figure 2). One chert flake was noted on the ground surface (Locale 1) (Appendix A:Figure 8).

Prehistoric lithic debitage and nondiagnostic artifacts were thinly scattered northwest of Tract 2 in a wave-eroded draw. These cultural materials probably originated from the adjacent ridge spur. A nondiagnostic biface and projectile point base were recovered. Actual extent of this site was undetermined. It was recorded as 11-Ct-384 (Figure 3; Appendix A:Figure 4).

### Tract 3 (Appendix A:Figure 1)

Pedestrian Survey. A fallow agricultural field (0.76 acres) had ground surface visibility of 0-20%. Site 11-Ct-58 was previously recorded within the general vicinity (Illinois State Historic Preservation Office, Correspondence, Appendix D). Survey results were negative.

### Tract 4 (Appendix A:Figure 1)

Pedestrian Survey. A fallow agricultural field (1.74 acres) had ground surface visibility of 0-20%. A specimen of groundstone was recovered (Locale 2) (Appendix A:Figure 8). Additional cultural materials were not noted.

Prehistoric lithic debitage and artifacts were thinly scattered north of Tract 4 within a wave-eroded draw and along a segment of beach. A specimen of groundstone and a nondiagnostic biface fragment were recovered. These cultural materials probably originated from the adjacent ridge spur. Actual extent of this site was undetermined until Phase II investigations; it is recorded as 11-Ct-385 (Figure 3; Appendix A:Figure 4). Sites KE-13 and 11-Ct-57 were previously recorded within this general vicinity (Illinois State Historic Preservation Office, correspondence, Appendix D). Site 11-Ct-384 is located approximately 200 m to the southwest.

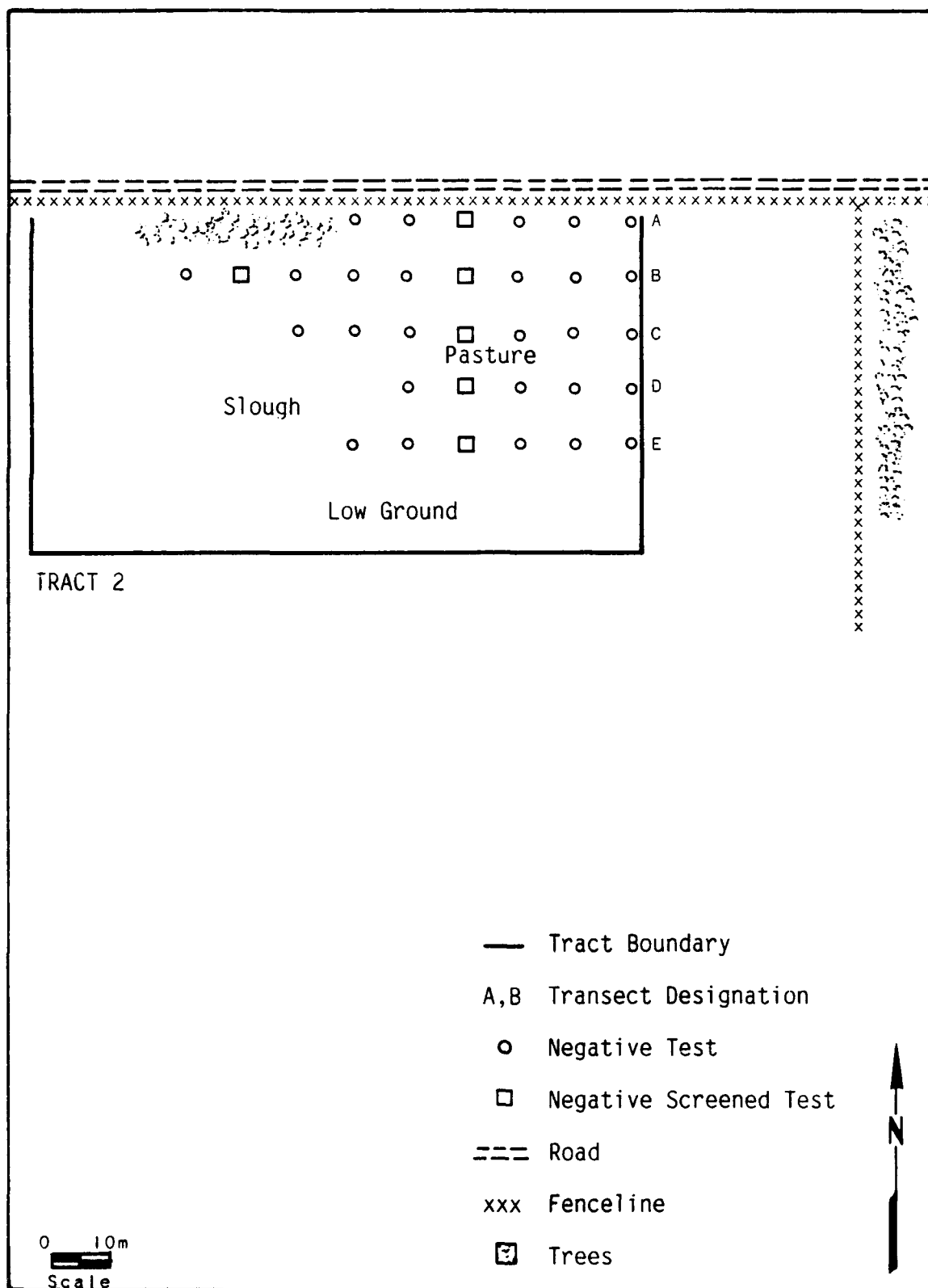


Figure 2. Shovel Test Locations, Tract 2

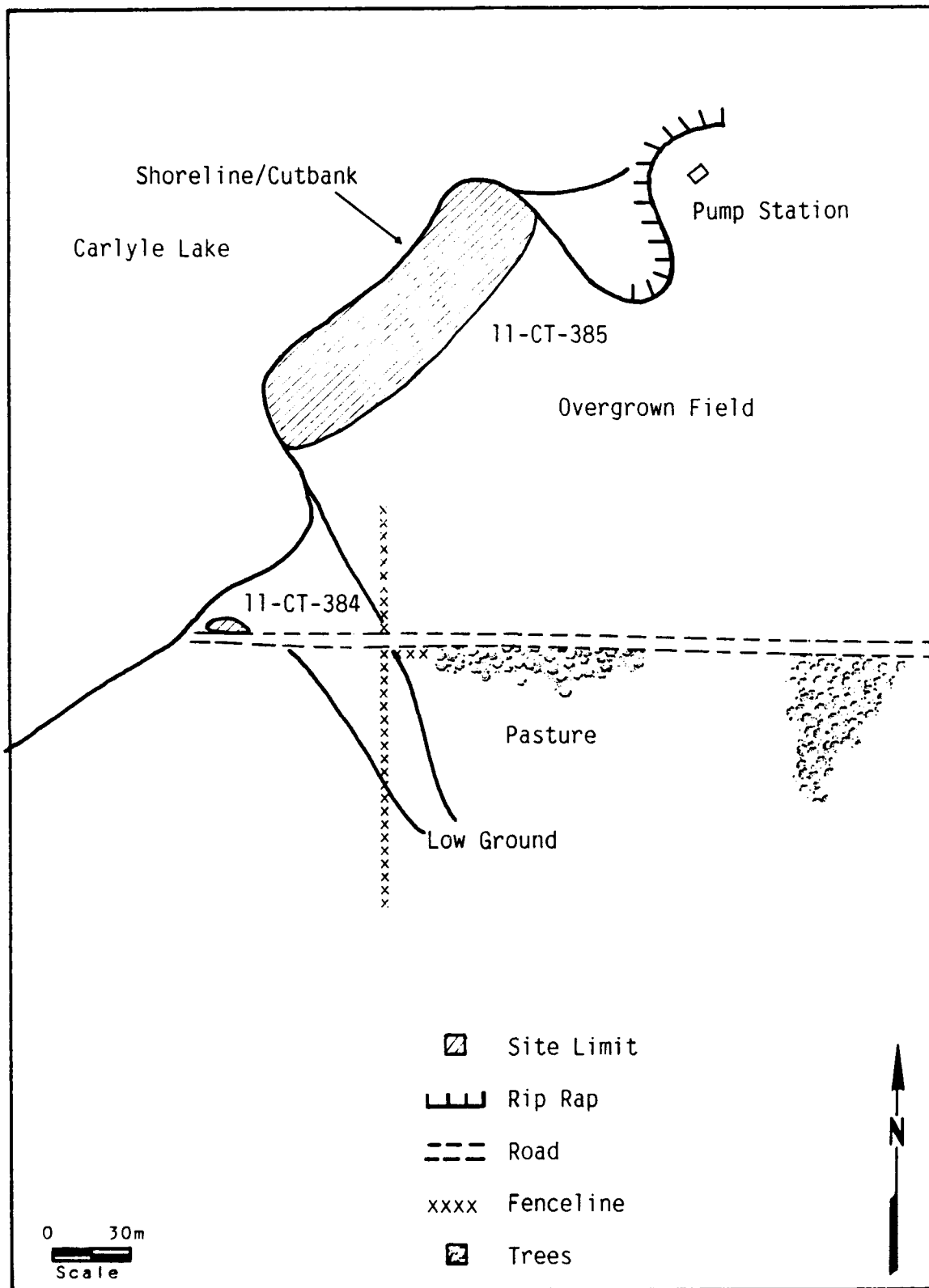


Figure 3. Site Plans - 11-Ct-384, 11-Ct-385

#### Tract 5 (Appendix A:Figure 1)

Pedestrian Survey. This fallow agricultural field (1.14 acres) had ground surface visibility of 0-10%. One chert flake was noted (Locale 3) (Appendix A:Figure 8).

#### Tract 6 (Appendix A:Figure 1)

Shovel Test. This timbered area (0.38 acres) had ground surface visibility of 0-80%. Wet ground was present in portions of the timber. Survey results were negative (Figure 4).

Pedestrian Survey. A plowed cornfield (0.38 acres) had ground surface visibility of 100%. Visibility was 0% in areas along a high water mark which was covered by driftwood. Survey results were negative.

#### Tract 7 (Appendix A:Figure 2)

Shovel Test. Ground surface visibility was 100% in timber (0.57 acres). Visibility was 0% in areas covered by driftwood. A draw located within the timber contained recent, washed-in sand. Survey results were negative (Figure 5).

Pedestrian Survey. This plowed cornfield (0.57 acres) had ground surface visibility of 70-100%. A fragment of groundstone was recovered (Locale 4) (Appendix A:Figure 9).

Prehistoric lithic debitage was south of Tract 7 and very thinly scattered over the surface of this same plowed field. The estimated area of this site was 3,600 m<sup>2</sup>. It is recorded as 11-Ct-387 (Figure 6; Appendix A:Figure 5).

#### South Boulder Revetment (Appendix A:Figure 2)

Pedestrian Survey. Ground surface visibility was 70-100% along 1,400 ft of wave-eroded shoreline (1 acre). Rip-rap and fallen trees covered some sections of this tract. One chert flake was observed on the beach (Locale 5) (Appendix A:Figure 9). Nondiagnostic historic artifacts were noted very thinly scattered along a wave-eroded draw (Locale 6) (Appendix A:Figure 9).

#### North Boulder Revetment (Appendix A:Figure 2)

Pedestrian Survey. Ground surface visibility was 70-100% along 3,400 ft of wave-eroded shoreline (2 acres). Rip-rap covered some of this tract. Survey results were negative.

#### Lake Villa Revetment (Appendix A:Figure 2)

Pedestrian Survey. Ground surface visibility was 100% along 900 ft of wave-eroded shoreline (0.5 acres). Fallen trees covered small

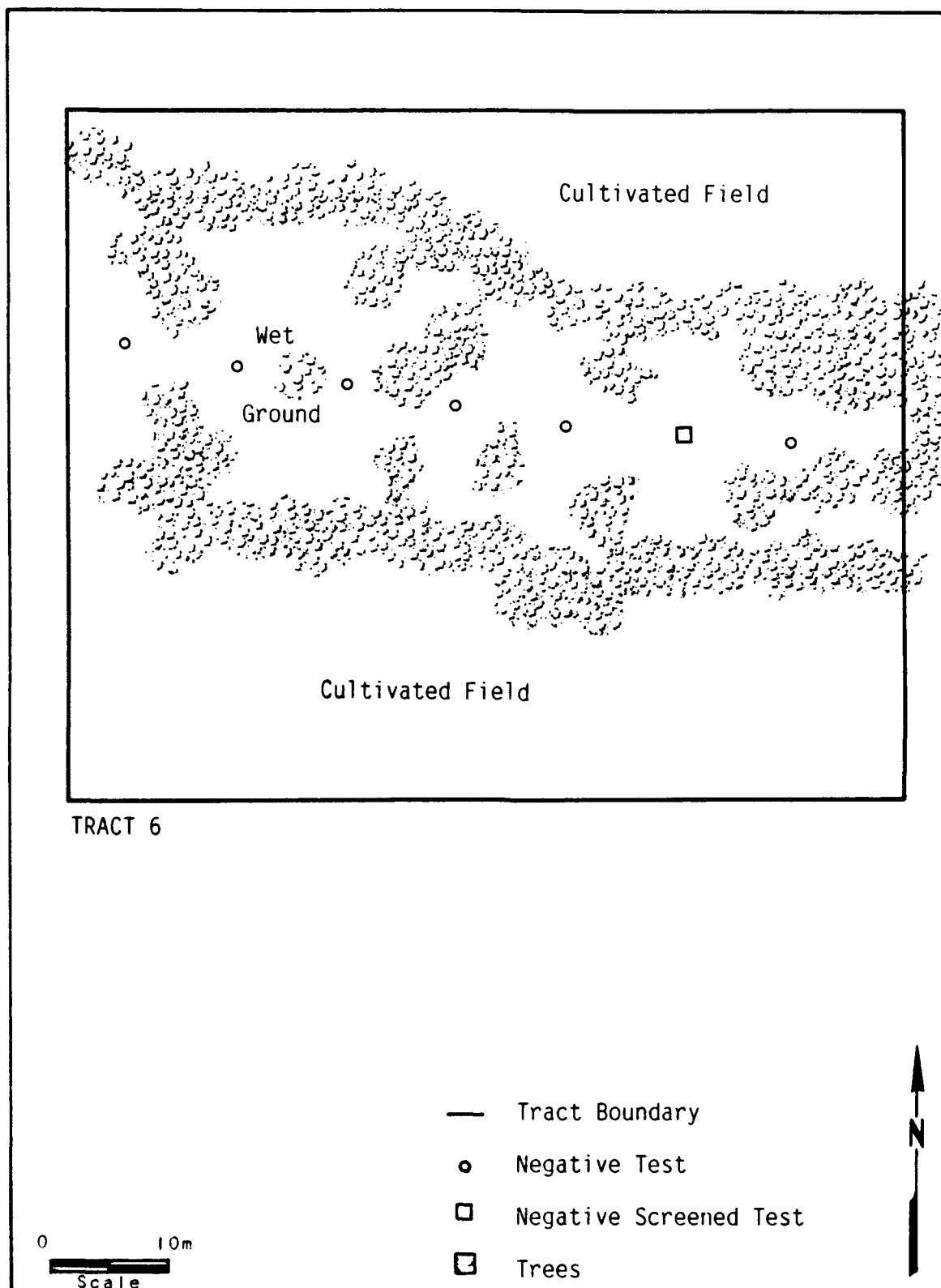


Figure 4. Shovel Test Locations, Tract 6



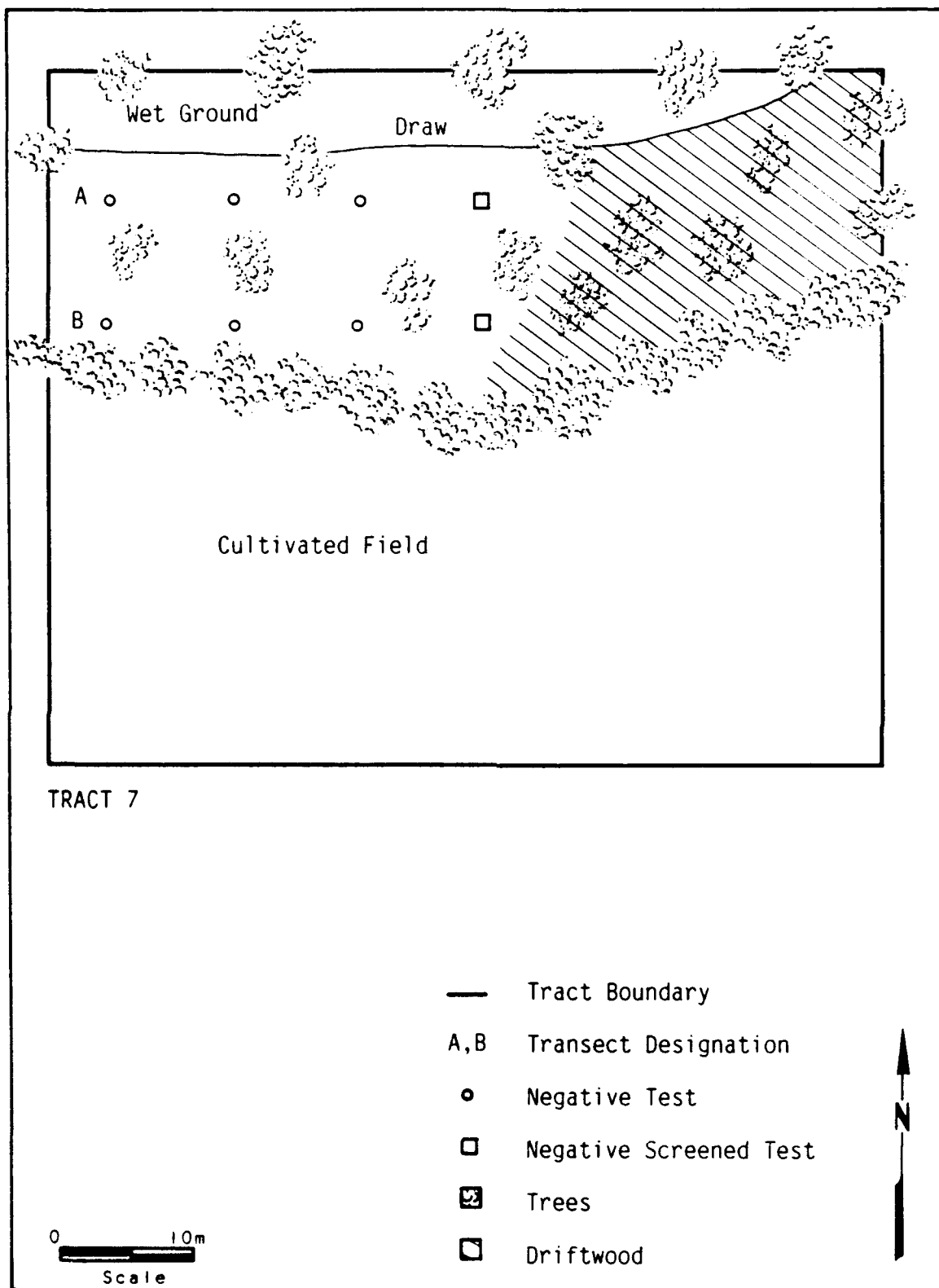


Figure 5. Shovel Test Locations, Tract 7

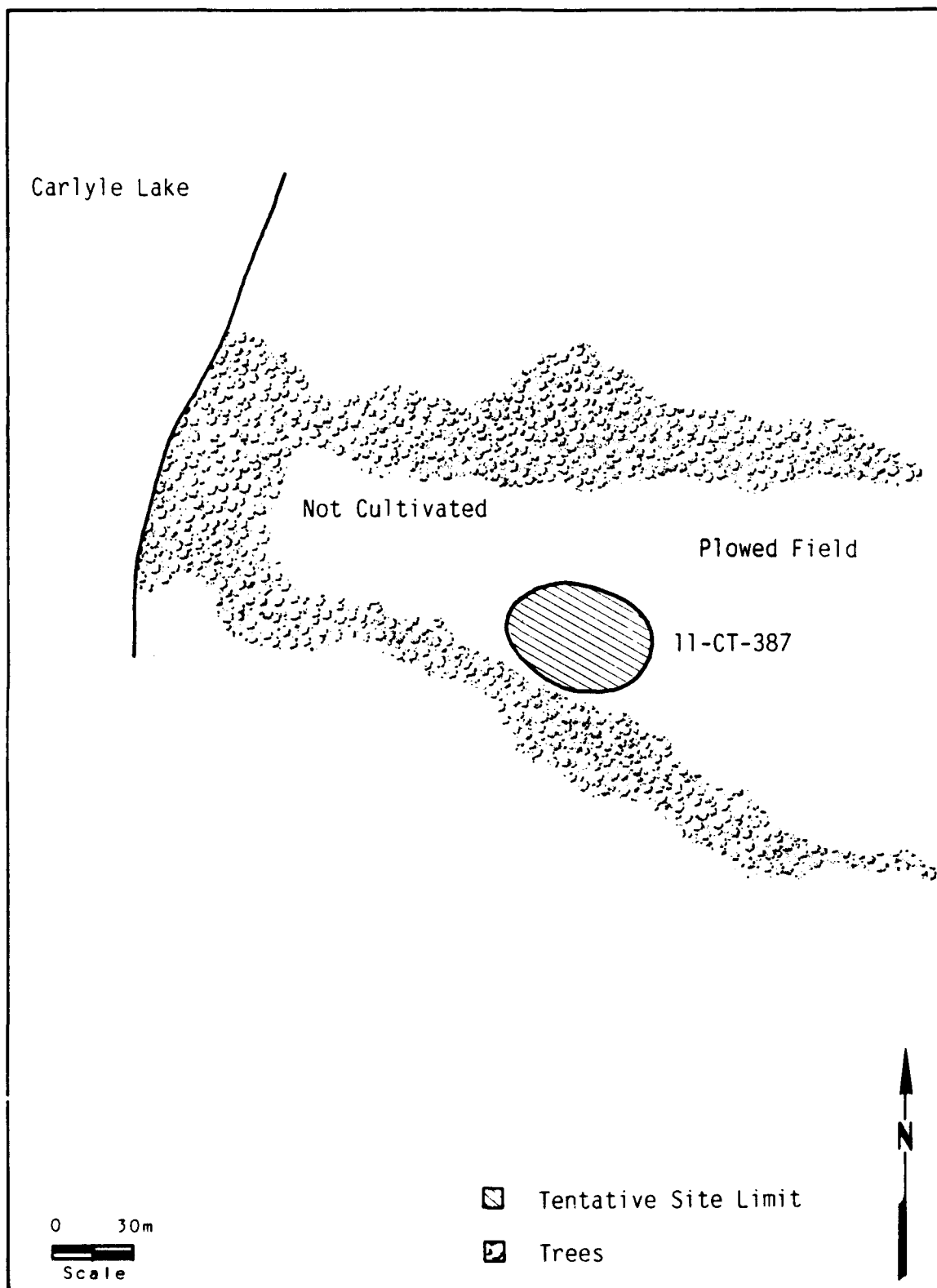


Figure 6. Site Plan, 11-Ct-387

sections of this tract. Prehistoric lithic debitage was very thinly scattered along a segment of beach and within a wave-eroded draw. One Middle Archaic biface was recovered. This cultural material probably originated from the adjacent ridge spur. Actual extent of this site was undetermined. It was previously recorded as 11-Ct-309 (Figure 7; Appendix A:Figure 5).

Additional prehistoric lithic debitage was thinly scattered along a segment of beach 150 m north of 11-Ct-309. These cultural materials probably originated from the adjacent ridge spur. Actual extent of this site was undetermined. It was recorded as 11-Ct-386 (Figure 8; Appendix A:Figure 5). Two burned areas and a buried soil horizon were noted within the eroded ridge spur profile a few meters north of this site. Originally recorded as part of the site, these were later determined to be the result of recent brush burning and landfill activities (Chapter V).

Historic artifacts were observed scattered within a wave-eroded draw 60 m north of 11-Ct-386. Cultural material included glass, crockery fragments, and brick. Diagnostic artifacts were recovered. This area was possibly used for trash dumping. Associated historic features were not discovered and may have been destroyed or covered by landfill activity (see above) (Locale 7) (Appendix A:Figure 9).

Pedestrian Survey. Residential lots (2 acres) had ground surface visibility of 0-50% and produced negative results.

#### Tract 11 (Appendix A:Figure 2)

Shovel Test. This timbered area (2.5 acres) had ground surface visibility of 0-20% and very wet ground in certain portions (Figure 9). One chert flake was recovered during subsurface testing (Locale 8) (Appendix A:Figure 9). One specimen of groundstone was noted on the surface (Locale 9) (Appendix A:Figure 9).

Pedestrian Survey. This plowed agricultural field (4.16 acres) had ground surface visibility of 100%. Survey results were negative.

#### Tract 12 (Appendix A:Figure 2)

Pedestrian Survey. This fallow agricultural field (3.33 acres) had ground surface visibility of 0-20%. A thin surface scatter of prehistoric lithic debitage was observed. One nondiagnostic projectile point fragment was recovered. The estimated area of this site is at least 225 m<sup>2</sup>. It was recorded as 11-Ct-390 (Figure 10; Appendix A:Figure 5).

Prehistoric lithic debitage and nondiagnostic artifacts were thinly scattered along a segment of beach 75 m southwest of 11-Ct-390. One specimen of groundstone was recovered. This cultural material probably originated from the adjacent ridge spur. Actual extent of this site was undetermined. It was recorded as 11-Ct-383 (Figure 10; Appendix A:Figure 5).

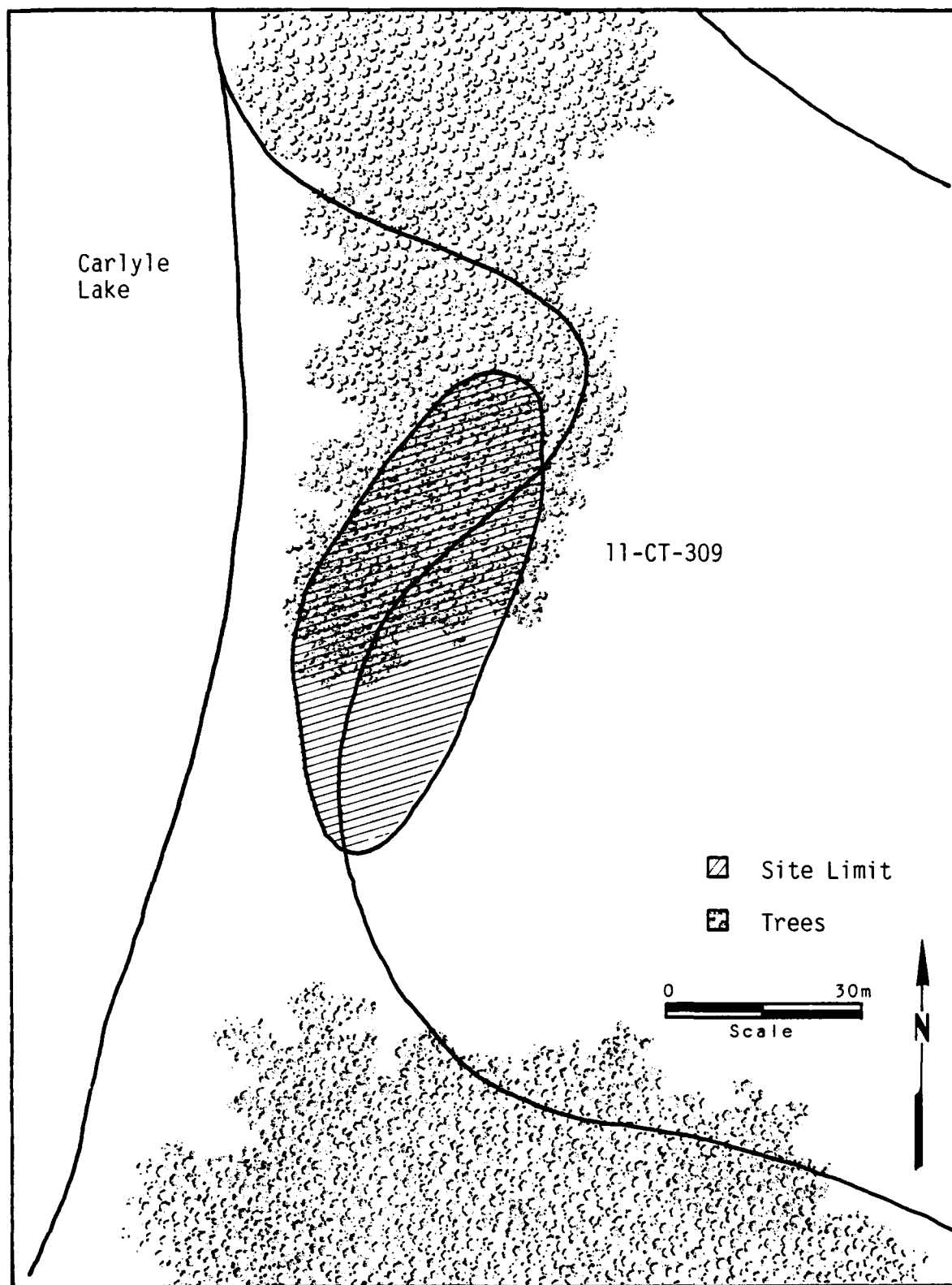


Figure 7. Site Plan, 11-Ct-309

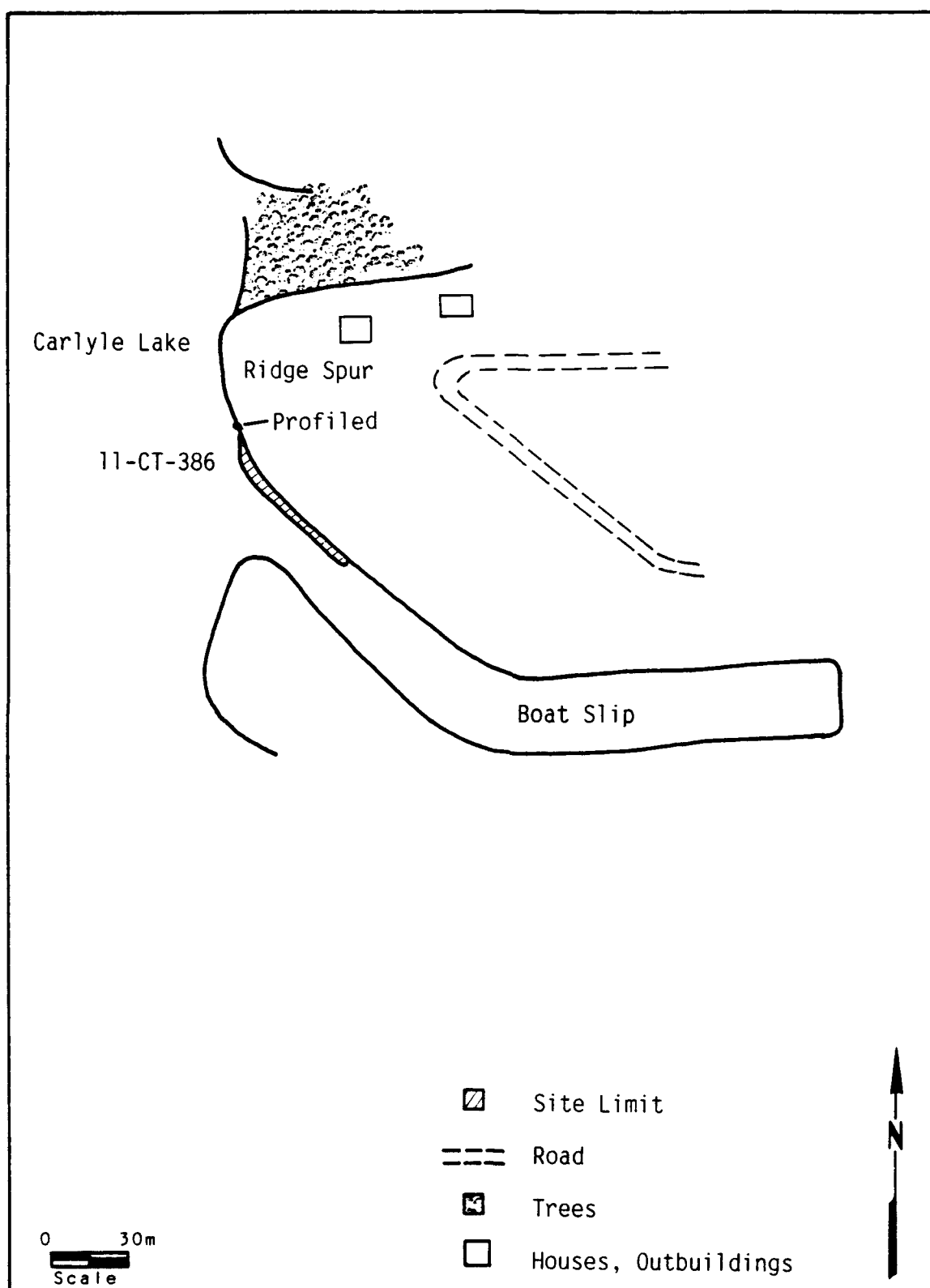


Figure 8. Site Plan, 11-Ct-386

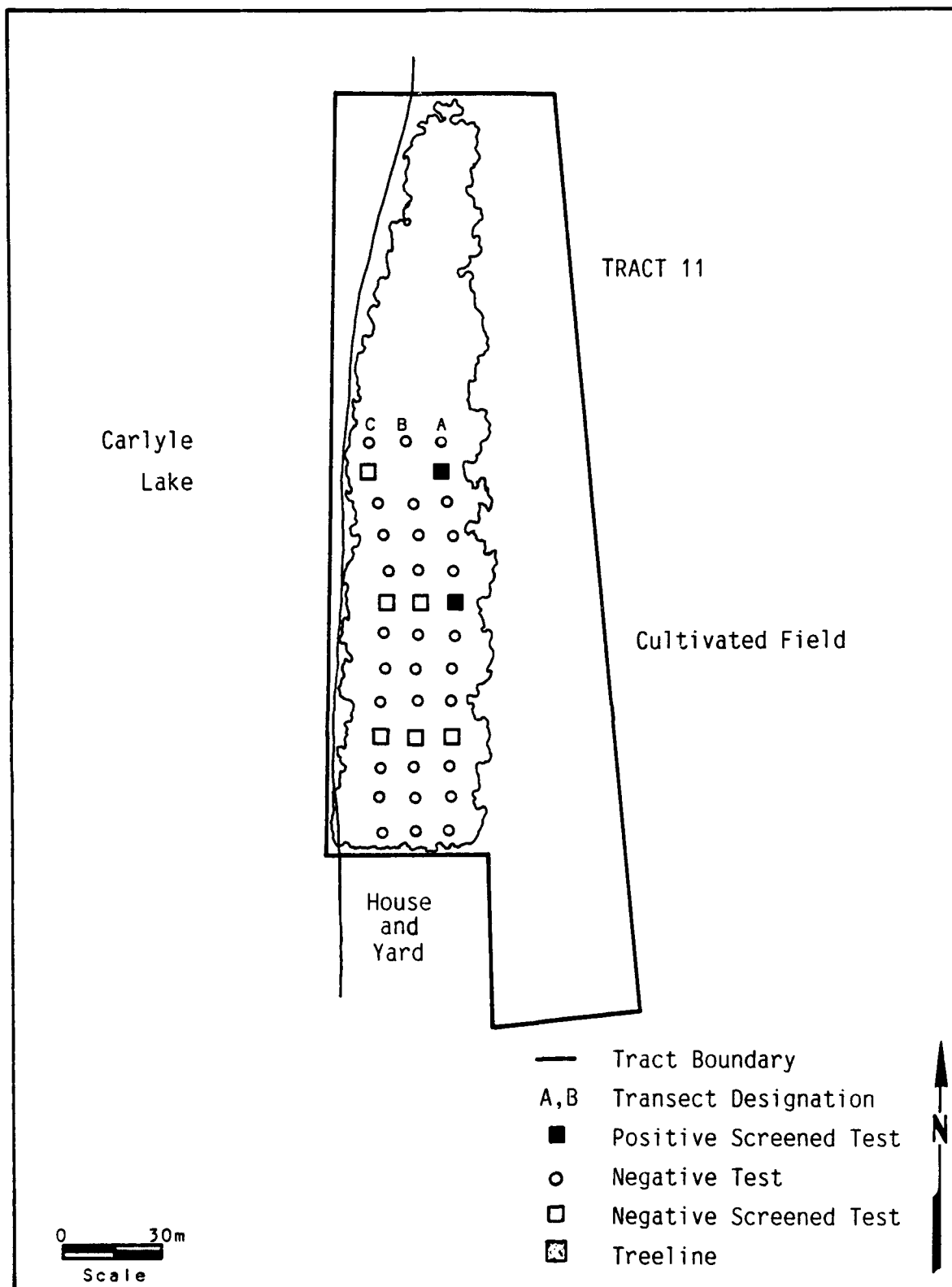


Figure 9. Shovel Test Location, Tract 11

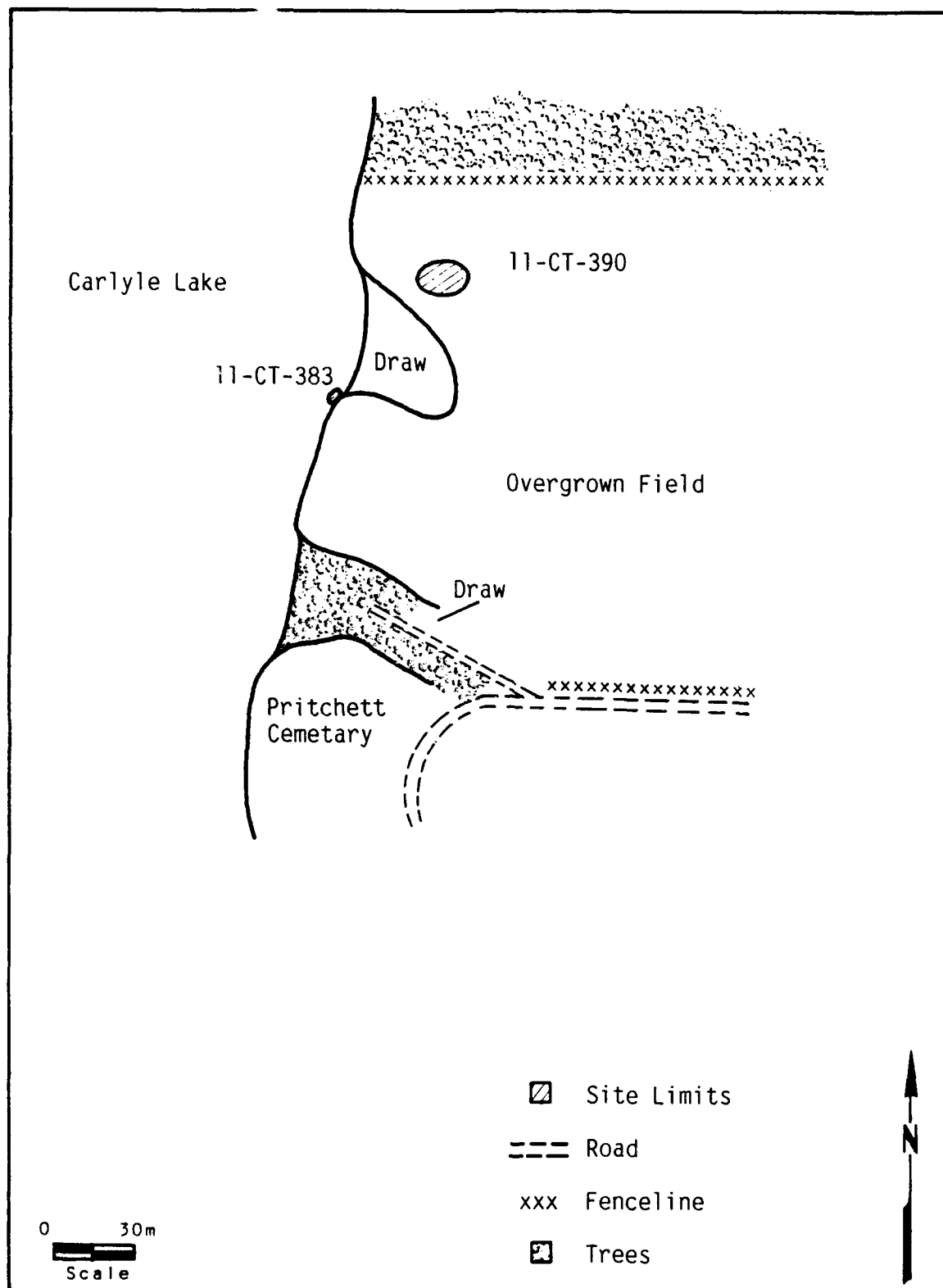


Figure 10. Site Plans - 11-Ct-383, 11-Ct-390

Prehistoric lithic debitage was very thinly scattered along a segment of beach west of Tract 12. This cultural material probably originated from the adjacent ridge spur, possibly from 11-Ct-390 (Locale 10) (Appendix A:Figure 9).

#### Tract 13 (Appendix A:Figure 2)

Pedestrian Survey. This timber and dense brush (3.8 acres) had ground surface visibility generally at 0%. One chert flake was noted on the surface (Locale 11) (Appendix A:Figure 9).

A nondiagnostic biface fragment was found on the beach west of Tract 13 (Locale 12) (Appendix A:Figure 9). A specimen of groundstone was observed north of Tract 13 within a wave-eroded draw (Locale 13) (Appendix A:Figure 9). Both items probably originated from the adjacent ridge spur.

#### Tracts 14-15 (Appendix A:Figure 2)

Pedestrian Survey. A plowed cornfield (1.5 acres) had ground surface visibility of 60-80%. A very thin surface scatter of prehistoric lithic debitage on a ridge spur was recovered. The area of this site was estimated to be at least 225 m<sup>2</sup>. It was previously recorded as 11-Ct-382 (Figure 11) (Appendix A:Figure 5).

Pedestrian Survey. This fallow agricultural field (2.5 acres) had ground surface visibility of 0%. The survey produced negative results.

Shovel Test. This treeline (0.5 acres) located on a ridge spur, had ground surface visibility of 0% and much of the treeline bank has been eroded by wave action. A small quantity of burned earth and charcoal, cracked rock, one chert flake, and a nondiagnostic biface fragment were recovered from subsurface tests (Figure 12). Actual extent of this buried site was undetermined. It was recorded as 11-Ct-388 (Figure 13) (Appendix A:Figure 5). Site 11-Ct-382 is approximately 100 m to the southwest.

A very small amount of prehistoric lithic debitage was recovered from subsurface shovel tests (Figure 12) 200 m northwest of 11-Ct-388 (Locale 14) (Appendix A:Figure 9).

Prehistoric lithic debitage and historic artifacts were very thinly scattered within a wave-eroded draw south of Tract 14. One crockery fragment was recovered (Locale 15) (Appendix A:Figure 9). This cultural material probably originated from the adjacent ridge spur, possibly from 11-Ct-382. A very small quantity of prehistoric lithic debitage and one groundstone fragment were noted on the beach west of Tract 15 (Locale 16 and 17) (Appendix A:Figure 9). This cultural material probably originated from the adjacent ridge spur.



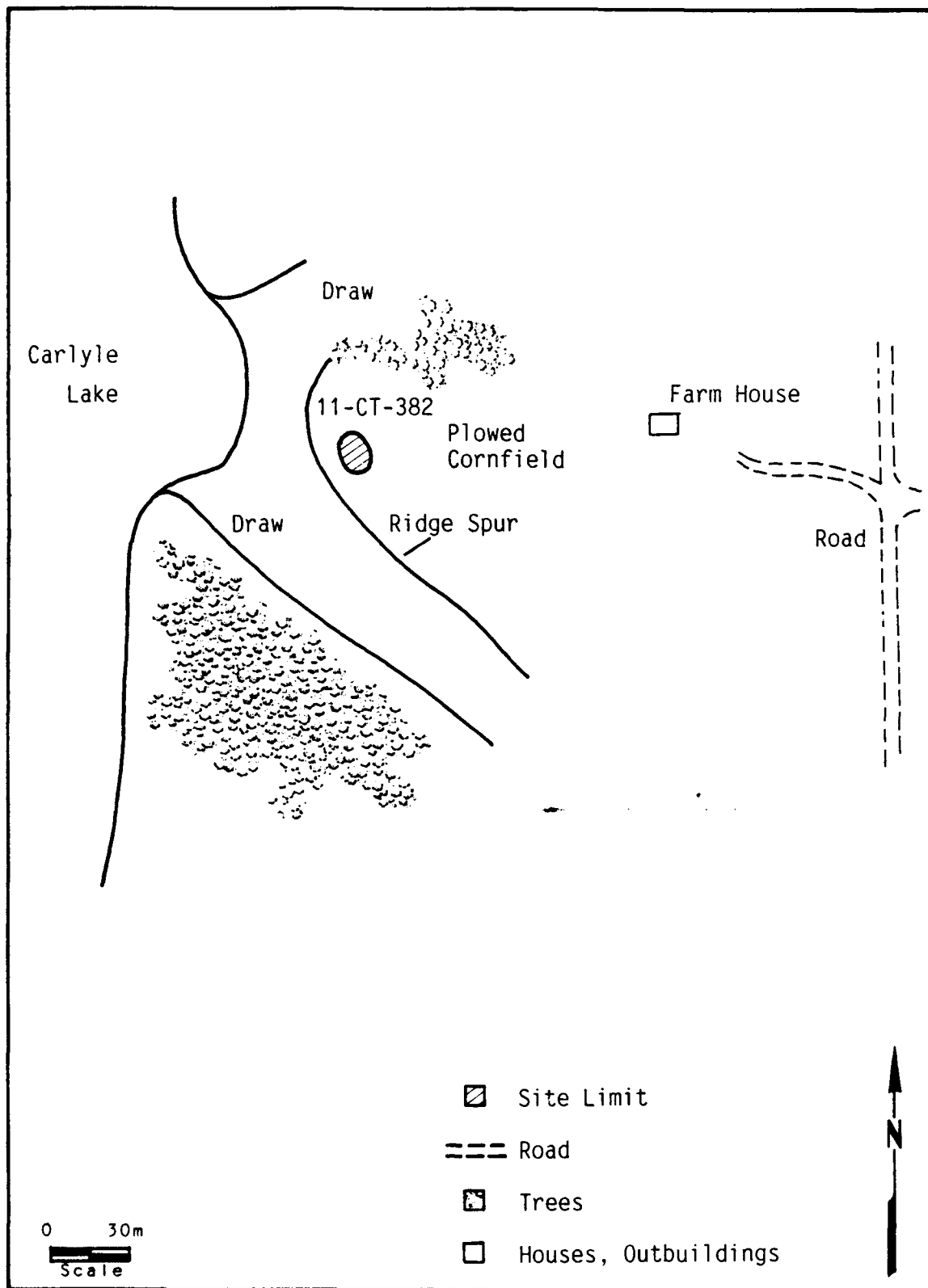


Figure 11. Site Plan, 11-Ct-382

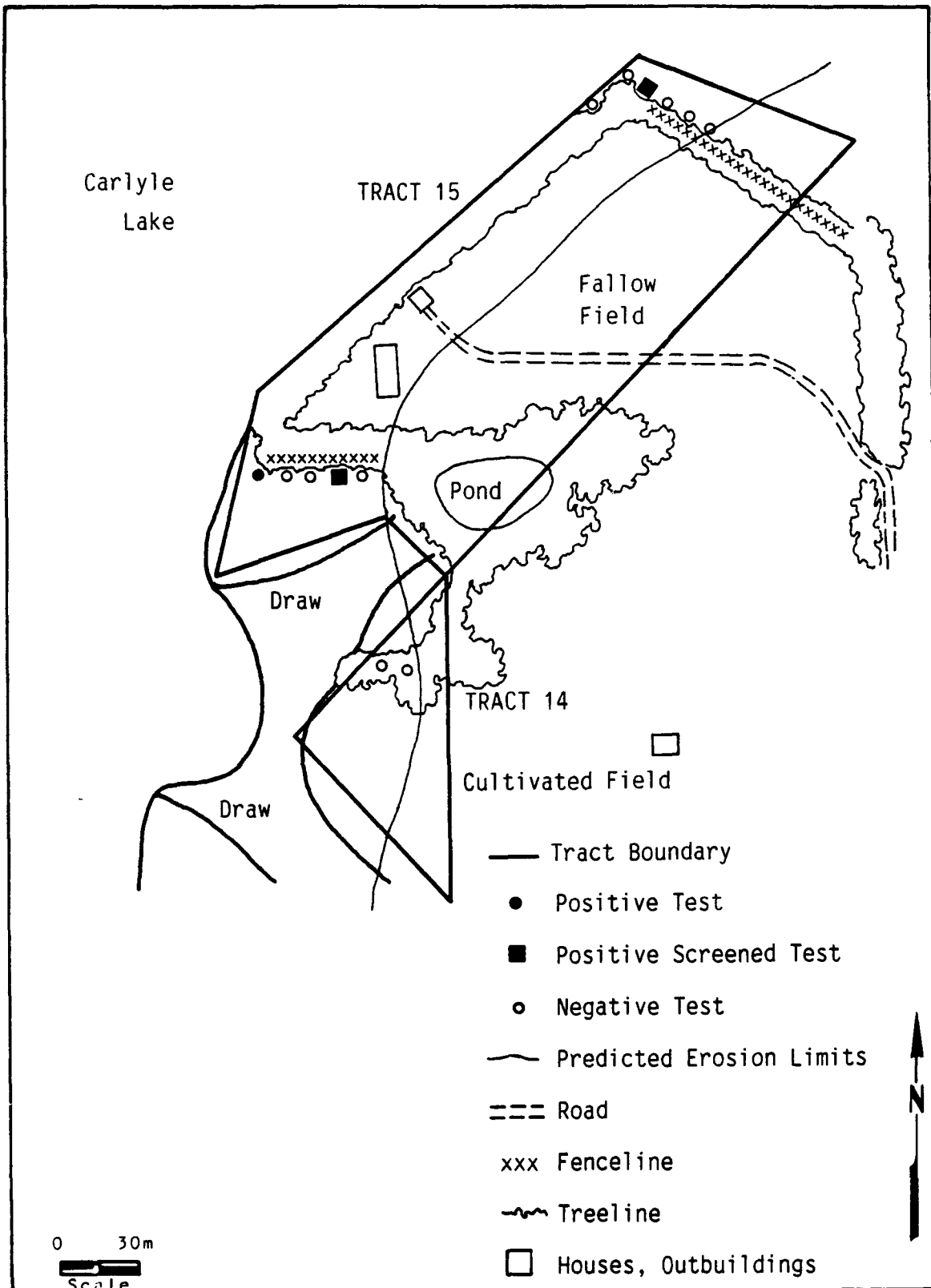


Figure 12. Shovel Test Locations, Tracts 14-15

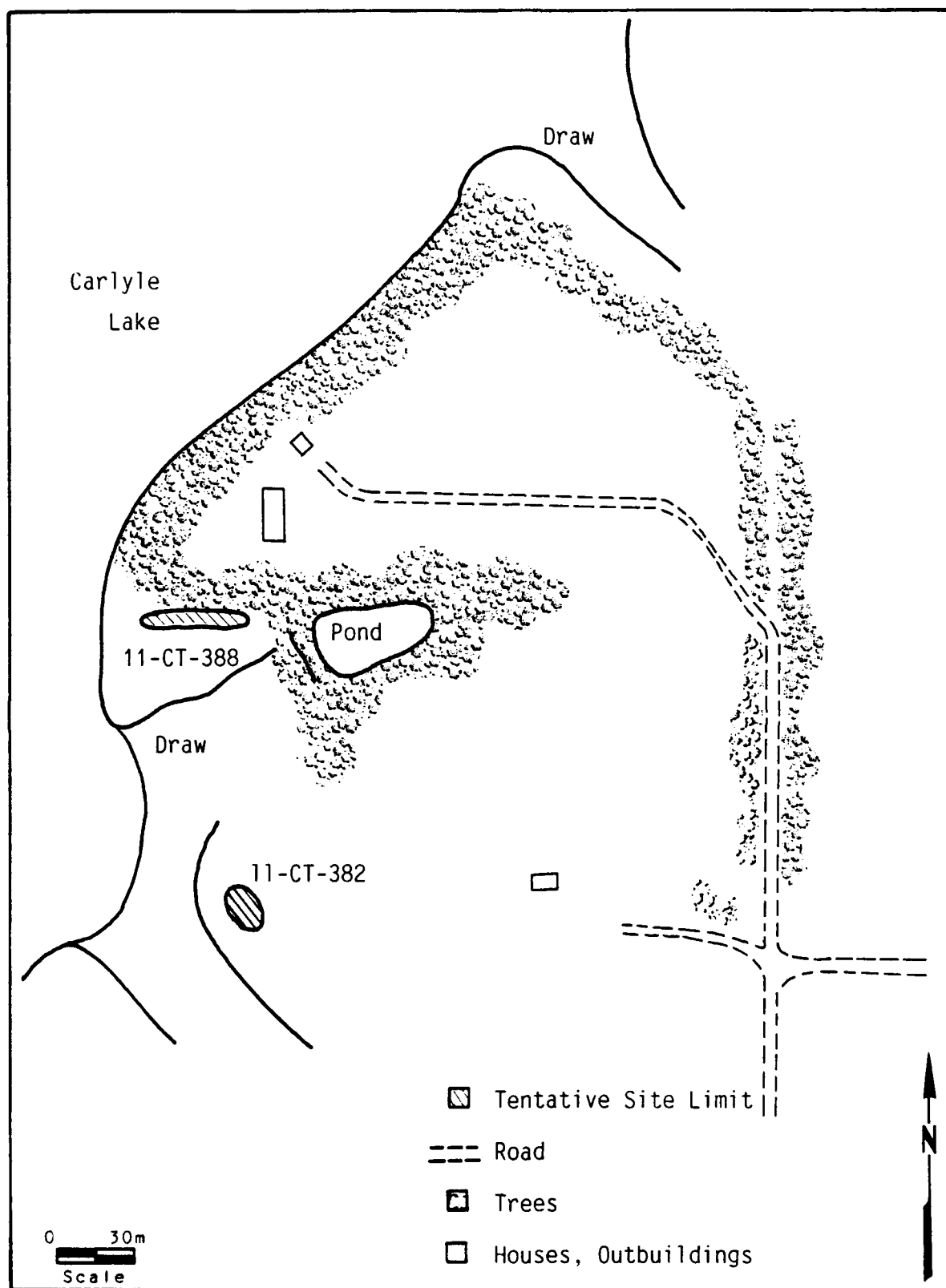


Figure 13. Site Plan, 11-Ct-388

### Tract 16 (Appendix A:Figure 2)

Pedestrian Survey. Here a plowed cornfield (1.28 acres) located on a ridge spur, had ground surface visibility of 70-80%. Prehistoric lithic debitage was scattered over the ground surface. A Middle Archaic projectile point fragment was recovered as well as one nondiagnostic projectile point fragment and one specimen of groundstone. The estimated area of this site is at least 3,600 m<sup>2</sup>. It was previously recorded as 11-Ct-83 (Figure 14; Appendix A:Figure 5).

Prehistoric lithic debitage and groundstone were thinly scattered north of Tract 16 along a segment of beach and probably originated from the adjacent ridge spur. Actual extent of this site was undetermined. Although recorded as 11-Ct-389, this site may be a northern extension of 11-Ct-83 (Figure 15; Appendix A:Figure 5).

One chert flake was observed west of Tract 16 within a wave-eroded draw. One diagnostic glass fragment was recovered from this area (Locale 18) (Appendix A:Figure 9).

A small concrete structure was noted west of Tract 16 within a timbered area (Locale 19) (Appendix A:Figure 9).

### Tract 17 (Appendix A:Figure 3)

Shovel Test. This timbered area (3.58 acres) had ground surface visibility of 0-60%, with wet ground in several portions. Historic artifacts were scattered over the ground surface east of an abandoned road. This cultural material was predominantly nondiagnostic broken glass, metal items, and brick. Very small amounts of prehistoric lithic debitage and historic materials were recovered from shovel tests east of the road (Figure 16). The estimated area of this site is at least 5,000 m<sup>2</sup>. It was previously recorded as 11-Ct-375 (Figure 17; Appendix A:Figure 7).

Very small amounts of prehistoric lithic debitage, including two specimens of groundstone, were recovered from shovel tests west of the road (Locale 20) (Appendix A:Figure 10).

Prehistoric lithic debitage and groundstone was observed north of Tract 17 scattered along a wave-eroded draw. One Middle Archaic projectile point was recovered as well as one Late Woodland projectile point fragment. Actual extent of this site was undetermined. It was previously recorded as 11-Ct-364 (Figure 17; Appendix A:Figure 7).

### Tract 18 (Appendix A:Figure 3)

Pedestrian Survey. This area of campground and commercial facilities (4.27 acres) had ground surface visibility of 0-100%. The original land surface has been subjected to localized disturbances of unknown extent. One chert flake was noted within the campground (Locale 21) (Appendix A:Figure 10); another was observed on the beach (Locale 22) (Appendix A:Figure 10).

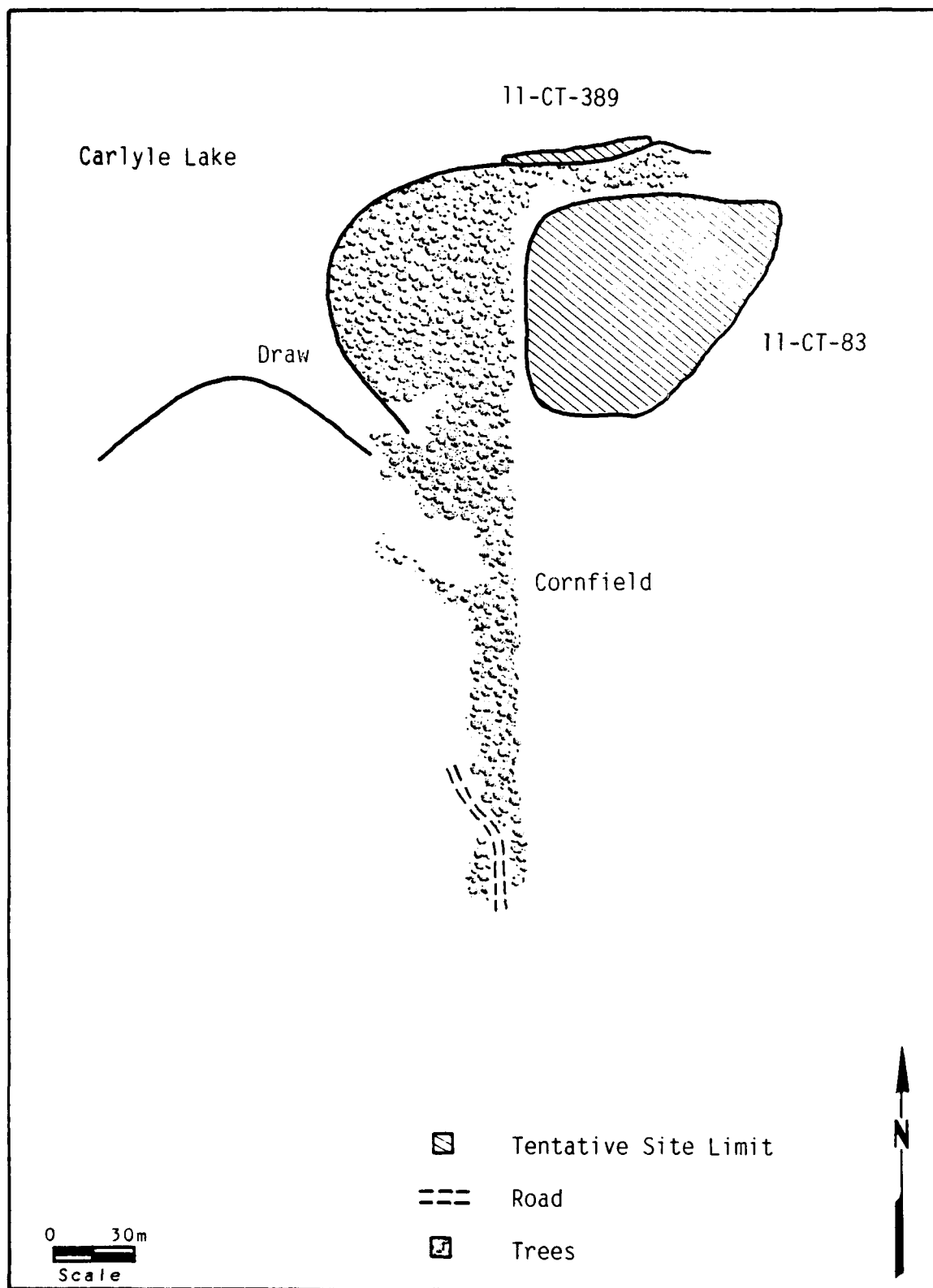


Figure 14. Site Plan, 11-Ct-83

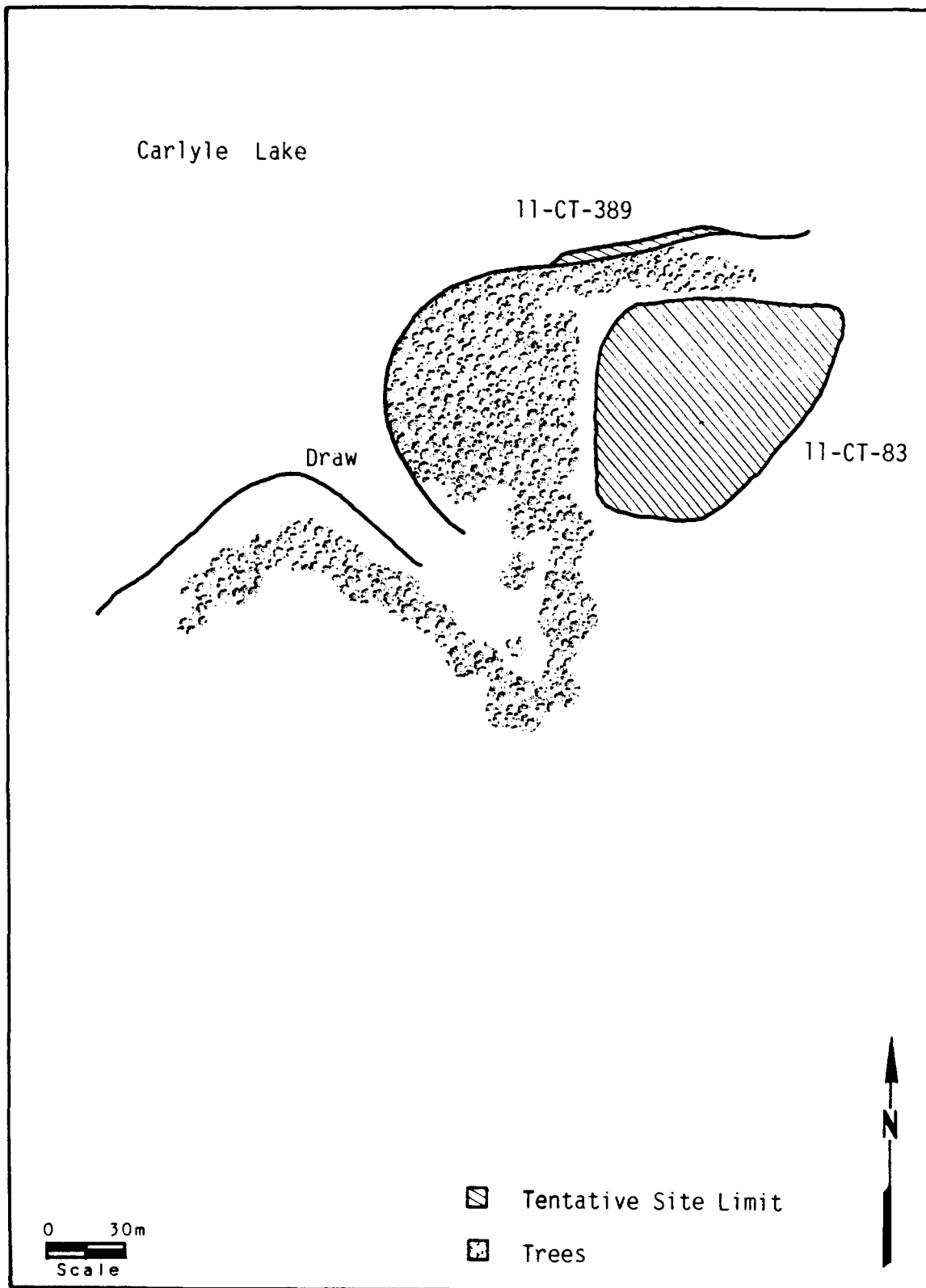


Figure 15. Site Plan, 11-Ct-389

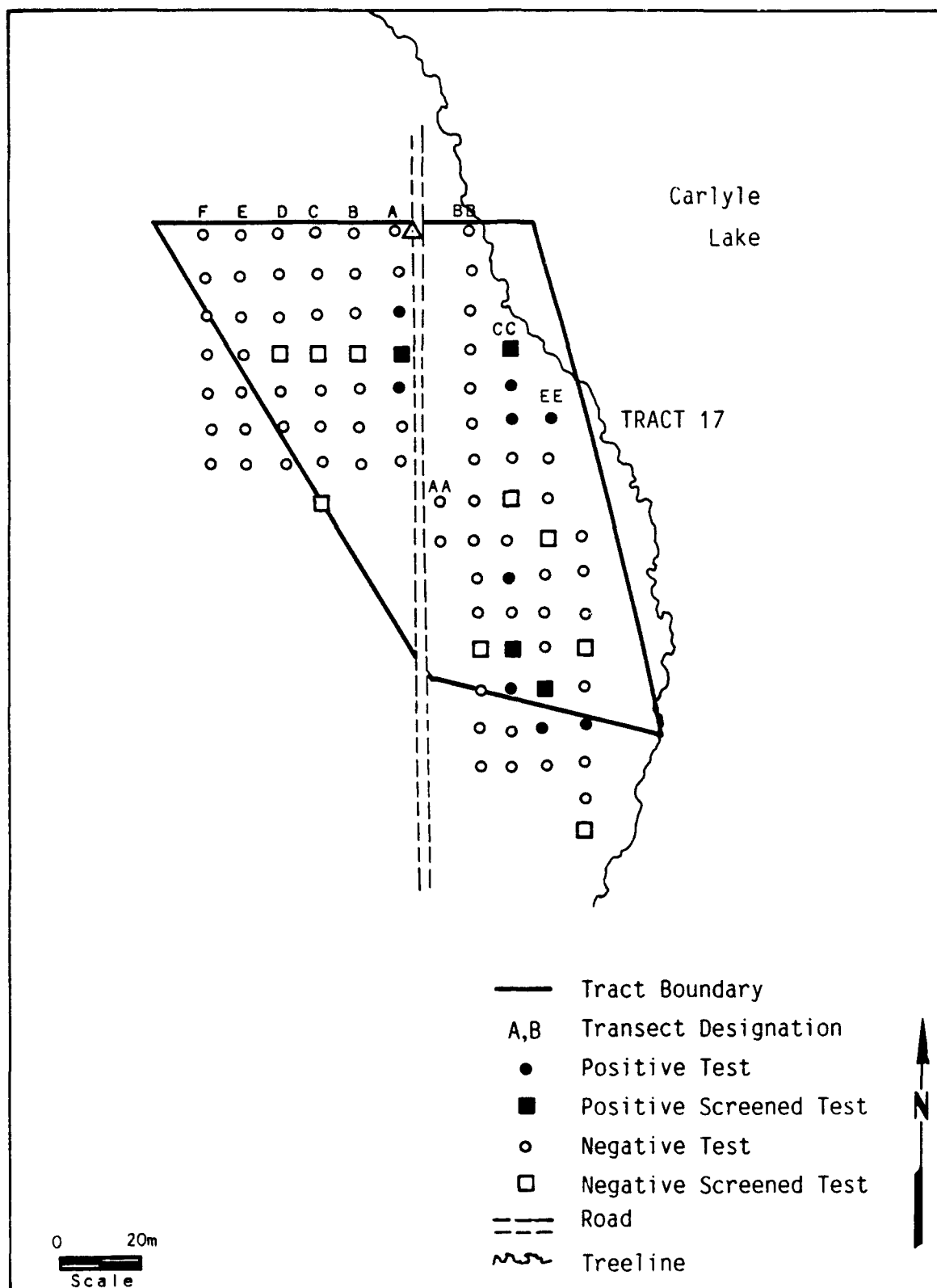


Figure 16. Shovel Test Locations, Tract 17

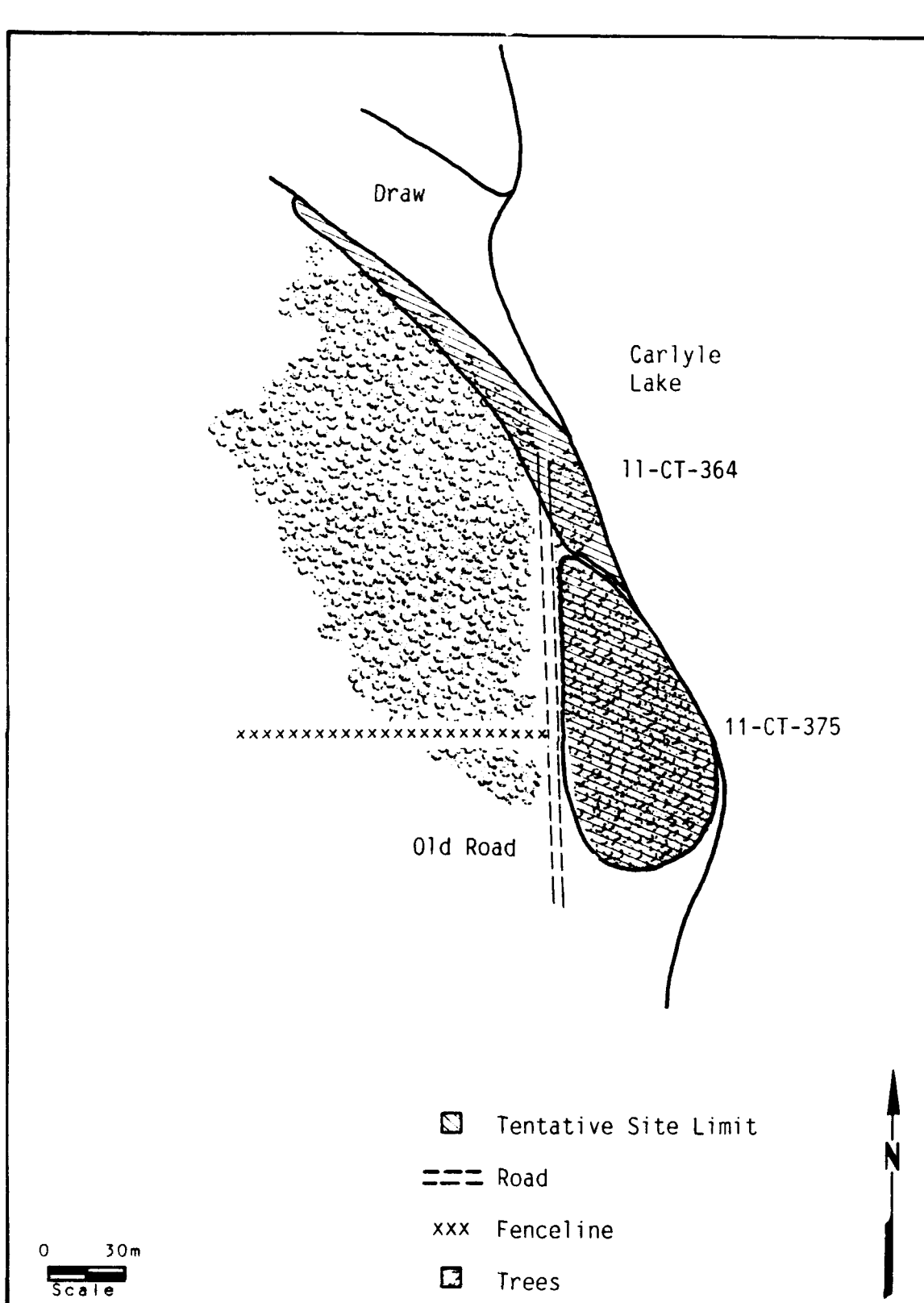


Figure 17. Site Plans - 11-Ct-364, 11-Ct-375



### Summary

Phase I investigation resulted in the location of 13 archaeological sites. Five sites were previously recorded. Eight new prehistoric sites were recorded. All newly recorded sites were of unknown cultural affiliation. Twenty two isolated find locales were recorded. Of these, 17 were of unknown prehistoric cultural affiliation. Two locales consisted of historic materials. Two additional locales each contained both prehistoric and historic material. One locale consisted of a small, historic concrete foundation for a structure no longer extant and of unknown use.

## CHAPTER V: PHASE II EVALUATIVE TEST EXCAVATIONS (DELIVERY ORDER NO. 6)

### Introduction

Phase II testing was conducted at five archaeological sites bordering Carlyle Lake (Appendix A: Figures 5-7). Specific sites to be investigated were selected by a representative of the U. S. Army Corps of Engineers, St. Louis District. Four sites were chosen from those recently recorded or revisited during Phase I investigations: 11-Ct-309, 11-Ct-364, 11-Ct-385, and 11-Ct-386. Site 11-Ct-389 was initially selected for testing, but a decision was made by the COE representative to investigate 11-Ct-34 (Orrell site) instead. This site was recorded previous to Phase I investigations of this project. First tested in 1959, this site underwent extensive excavation in 1961 (Salzer 1963:23). Phase II field work commenced on August 27, 1985, and ended on September 17, 1985.

### Methodology

Archaeological investigation was conducted at 11-Ct-386 by preparation of a 1 m wide profile of the adjacent wave-eroded ridge spur. This was accomplished by shovel scraping and troweling. Investigation of the remaining sites was carried out by hand excavation of test units. These were set up at each site within a metric grid system. Test unit dimensions were 1 m x 1 m and 1 m x 2 m. Selection of unit size was determined by the COE representative after consideration of the nature of each site. Matrix was removed from each test unit in arbitrary levels of no more than 10 cm thickness except when a distinct plow zone was noted. Plow zones were removed as one level. Matrix from each level was screened through 1/2 in mesh hardware cloth. Floors were troweled or shovel scraped at the bottom of every level, then examined for cultural materials or features. Diagnostic cultural materials, features, animal burrows, and other pertinent manifestations noted at the bottom of each level were sketched on plan view forms. Profiles of one wall of every test unit were drawn, and general soil texture and Munsell color values were recorded. Black and white and color photographs of test unit plan views, profiles, and features were taken except when completely sterile floors or walls were present. Cultural features were cross-sectioned and drawn in profile. One or more 5 liter samples of feature fill were retained from each feature for later flotation. Remaining fill was removed and screened through 1/2 in mesh hardware cloth.

Test locations at the investigated sites were plotted on sketch maps. Site 11-Ct-385 was mapped by theodolite. This map indicates site limits, locations of test units, elevation contours, and other pertinent natural and cultural features. The position of the site is referenced to an aluminum monument provided by the COE. This was located in an area unlikely to be disturbed in the near future.

Test results for each site are presented below. Tabulations and analyses of recovered cultural materials are provided in Chapter VI. Interpretation of the data from each site is offered in Chapter VII.

## Results

### 11-Ct-34 (Orrell Site)

Positioned on a bluff top immediately northwest of the old Kaskaskia River channel and floodplain (Appendix A:Figure 6), the site is presently surrounded on three sides by Carlyle Lake. Wave action has deflated and churned much of the soil.

Two 1 m x 2 m test units were excavated. Test unit 1 was positioned partly within an exposed, wave-deposited concentration of mussel shell, prehistoric lithic debitage, and sherds (predominantly Late Woodland and Mississippian). Test unit 2 was located further back from the lake shore within an area of little or no surficial cultural material. Both test units were excavated to a depth of 30 cm below ground surface (Figures 18 and 19).

Test unit 1 had a disturbed, friable silt loam matrix within the first level. The second and third levels were composed of more compact silt loam, with a higher clay content. A large quantity of mussel shell fragments, prehistoric lithic debitage, and sherds (Late Woodland and Mississippian) was recovered from the first level. Lesser amounts of these same items were recovered from the second level along with one recent roof shingle fragment. Cultural materials were absent from the third level. Definable cultural features were absent from all levels.

Test unit 2 contained a silt loam matrix within the first level which changed to a mottled, compact, silty clay in the third level. A plow zone was not defined. Very small amounts of mussel shell, prehistoric lithic debitage, and one Mississippian sherd were recovered from the first level. Very little prehistoric lithic debitage was recovered from the second level and was completely absent from the third level. Definable cultural features were absent from all levels.

### 11-Ct-309

Two 1 m x 2 m test units were excavated. Test unit 1 was located on a gentle, grassy slope. Test unit 2 was positioned at the top of this slope immediately adjacent to a wave-eroded bank. Both test units

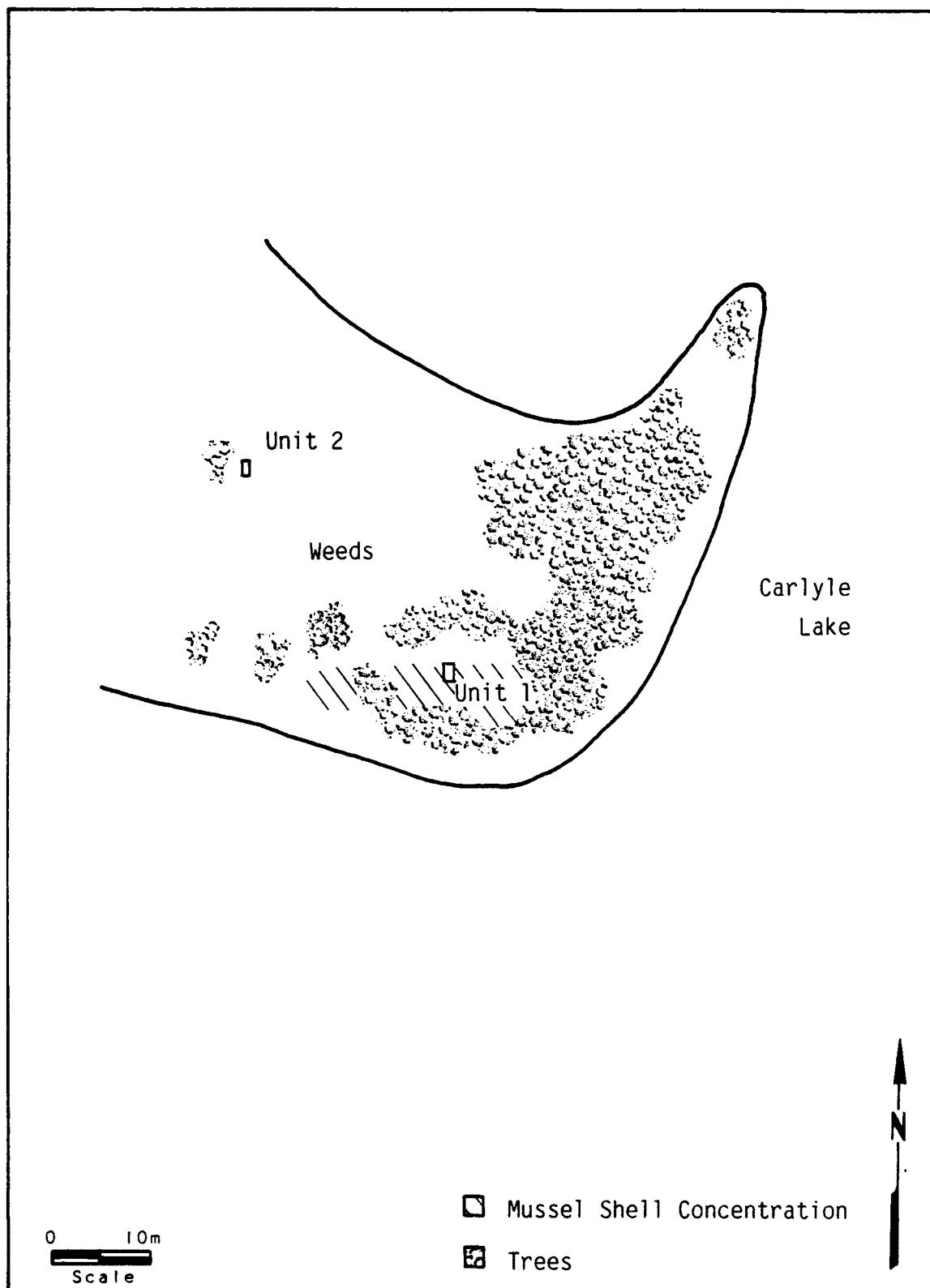
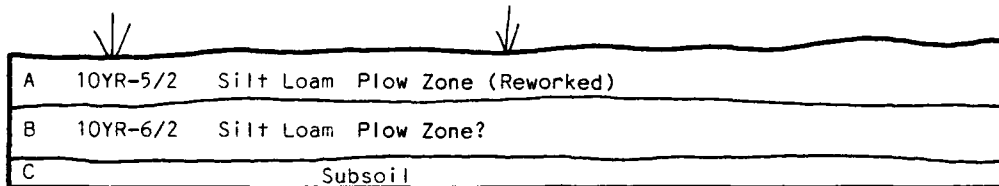


Figure 18. Test Unit Locations, 11-Ct-34



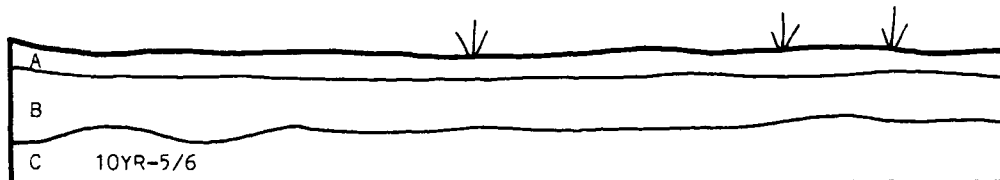
Many Iron/Manganese Pellets

A-Large Quantity Mussel Shell Reworked by Wave Action

C-Silt Loam

11-CT-34  
Orrell Site  
Test Unit 1  
East Wall Profile

0 20cm  
Scale



Many Iron/Manganese Pellets

A-10YR-8/1 Reworked Subsoil Silt Loam

B-10YR-8/1 Subsoil Silt Loam

C-Subsoil Silty Clay

11-CT-34  
Orrell Site  
Test Unit 2  
West Wall Profile

0 20cm  
Scale

Figure 19. Profiles, 11-Ct-34

exhibited a plow zone consisting of friable silt loam and were excavated to depths of 50 cm below ground surface (Figures 20 and 21). Succeeding levels exhibited a more compact silt loam with a higher clay content. The bottom level of these test units was composed of silty clay.

Very small amounts of prehistoric lithic debitage and charcoal were recovered from the plow zones of both test units. Succeeding levels within test unit 1 were culturally sterile. A very small amount of prehistoric lithic debitage and charcoal was recovered from subplow zone levels of unit 2. Definable cultural features were absent from all levels of both test units.

#### 11-Ct-364

One 1 m x 2 m and three 1 m x 1 m test units were excavated within and adjacent to this site. Test unit 1 (1 m x 2 m) was located at timber's edge near a wave-eroded draw. Test unit 2 (1 m x 1 m) was positioned east of an abandoned road, within timber but near the lake shore. Test units 3 and 4 (both 1 m x 1 m) were located outside the recorded site boundary, within timber, and west of the abandoned road. All four test units had upper levels with varying amounts of humic silt loam; middle levels with increasingly compact soil with a higher clay content; and bottom levels with compact, sterile clay soil. A plow zone could be defined only in test unit 2. Cultural features were not located in any of the units (Figures 22 and 23).

Test unit 1 (1 m x 2 m) was in a locality with a moderate scatter of lithic debitage on the surface. The upper level appeared considerably disturbed, being churned and somewhat eroded by wave action. Excavated to a depth of 30 cm below the surface, the unit produced very small amounts of prehistoric lithic debitage in all three levels. Level 3 materials all were restricted to the upper parts of the level.

In the vicinity of test unit 2, prehistoric lithic debitage and some historic materials were visible on the surface. Excavated to 40 cm below the surface, test unit 2 (1 m x 1 m) was the only unit with a definable plow zone. A moderate quantity of prehistoric lithic debitage, two Late Woodland sherds, a few historic items, a small amount of gravel, and a very small amount of charcoal were recovered from the plow zone. Levels below the plow zone contained small quantities of debitage, one nondiagnostic biface fragment, and a piece of modern wire.

Test unit 3 (1 m x 1 m), excavated to 40 cm below the surface, contained a very small amount of prehistoric lithic debitage within the upper three levels; the fourth level was sterile.

Test unit 4 (1 m x 1 m), excavated to 30 cm below the surface, produced a very small amount of prehistoric lithic debitage in the upper two levels; the third and final level was sterile.

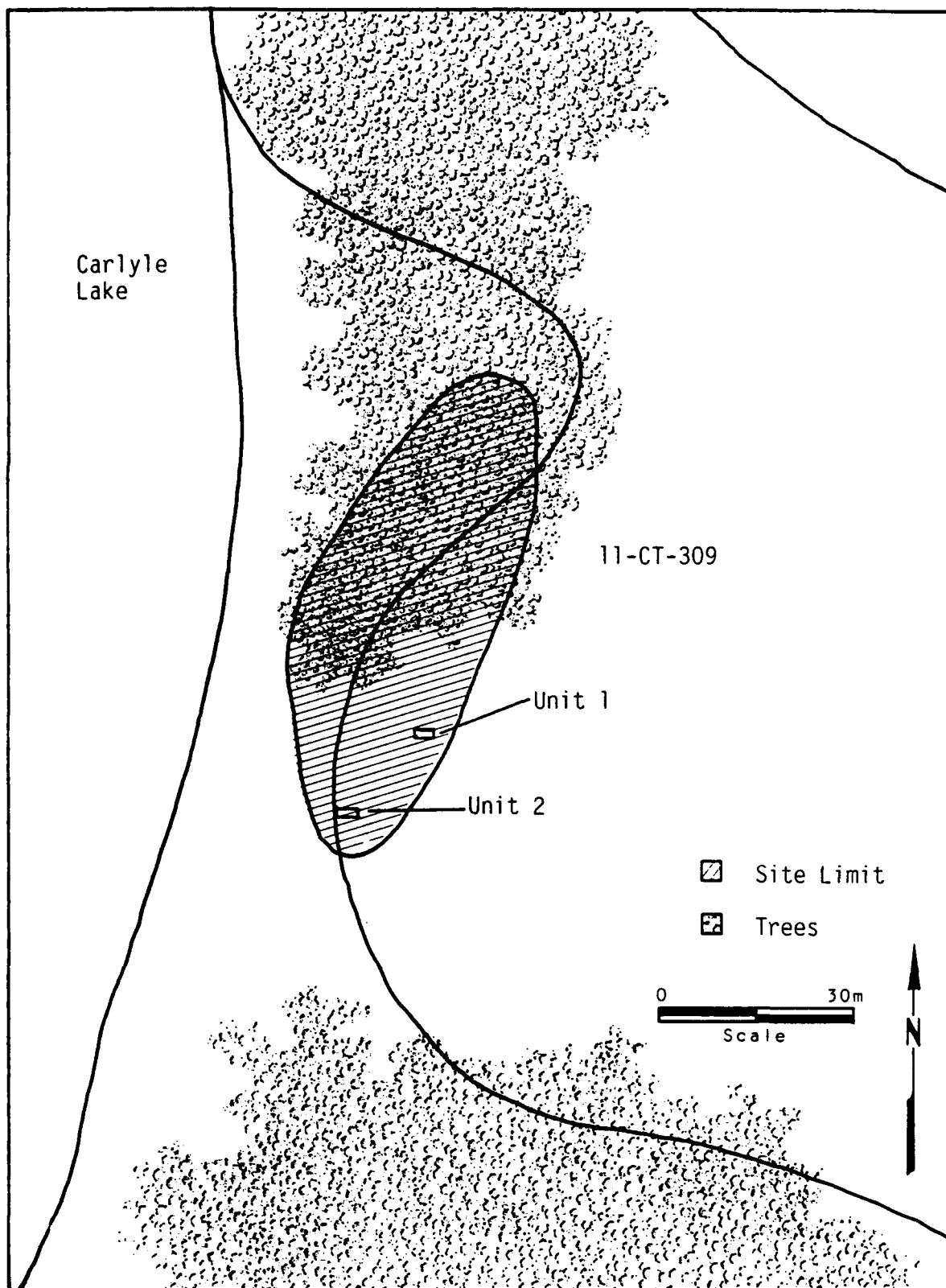
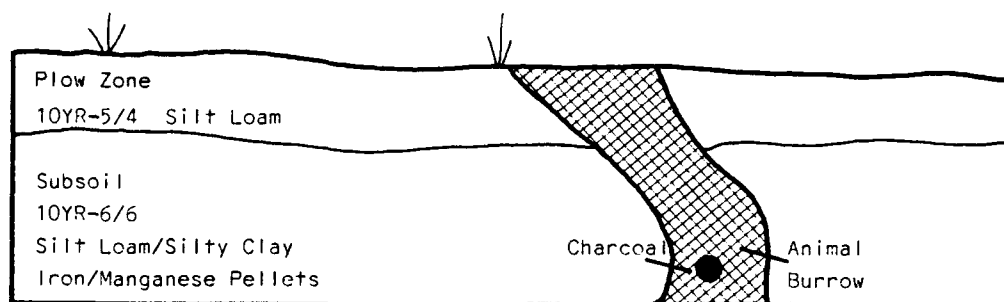


Figure 20. Test Unit Locations, 11-Ct-309



11-CT-309  
Test Unit 1  
South Wall Profile

Figure 21. Profile, 11-Ct-309



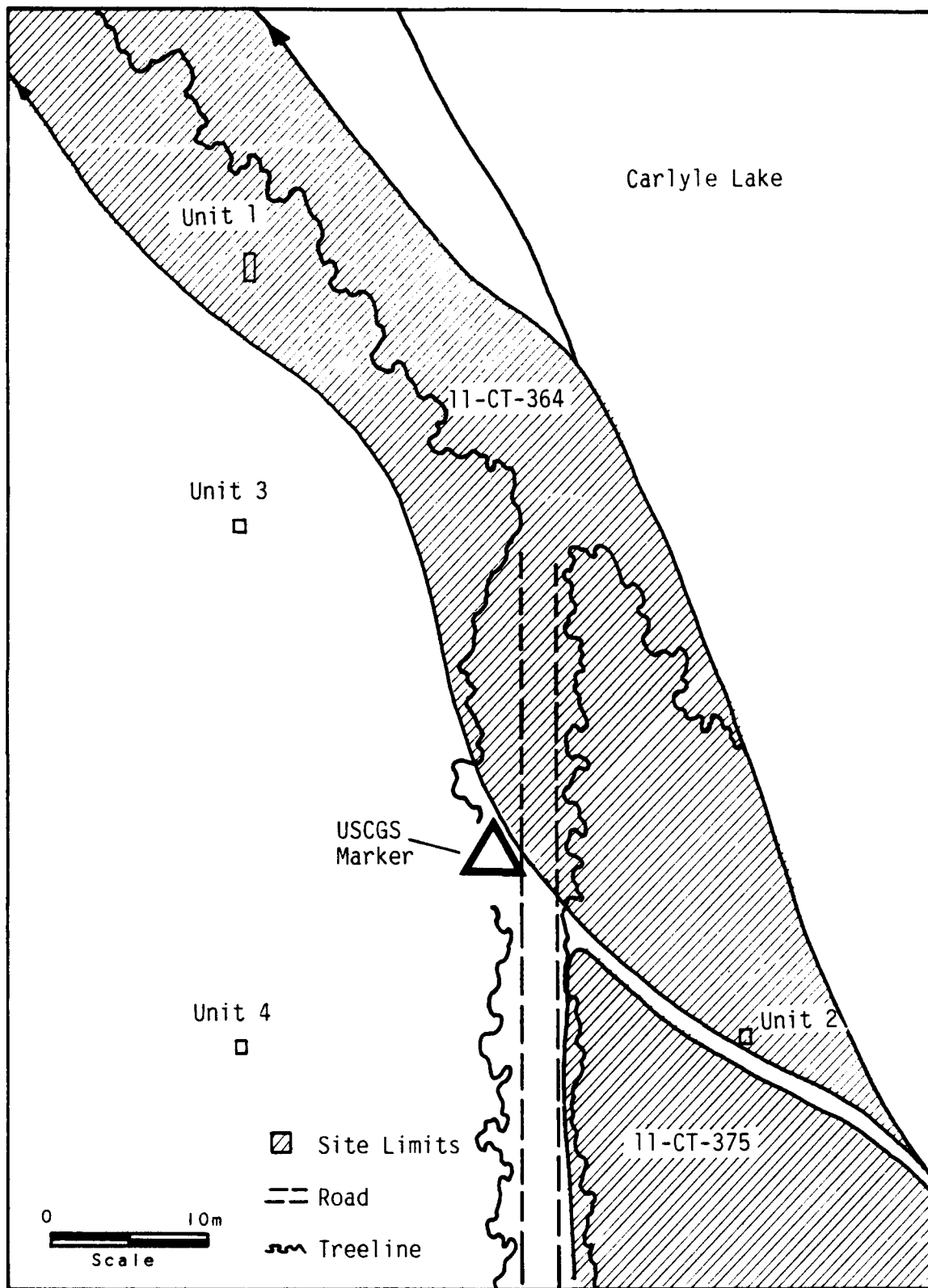


Figure 22. Test Unit Locations, 11-Ct-364 and Vicinity

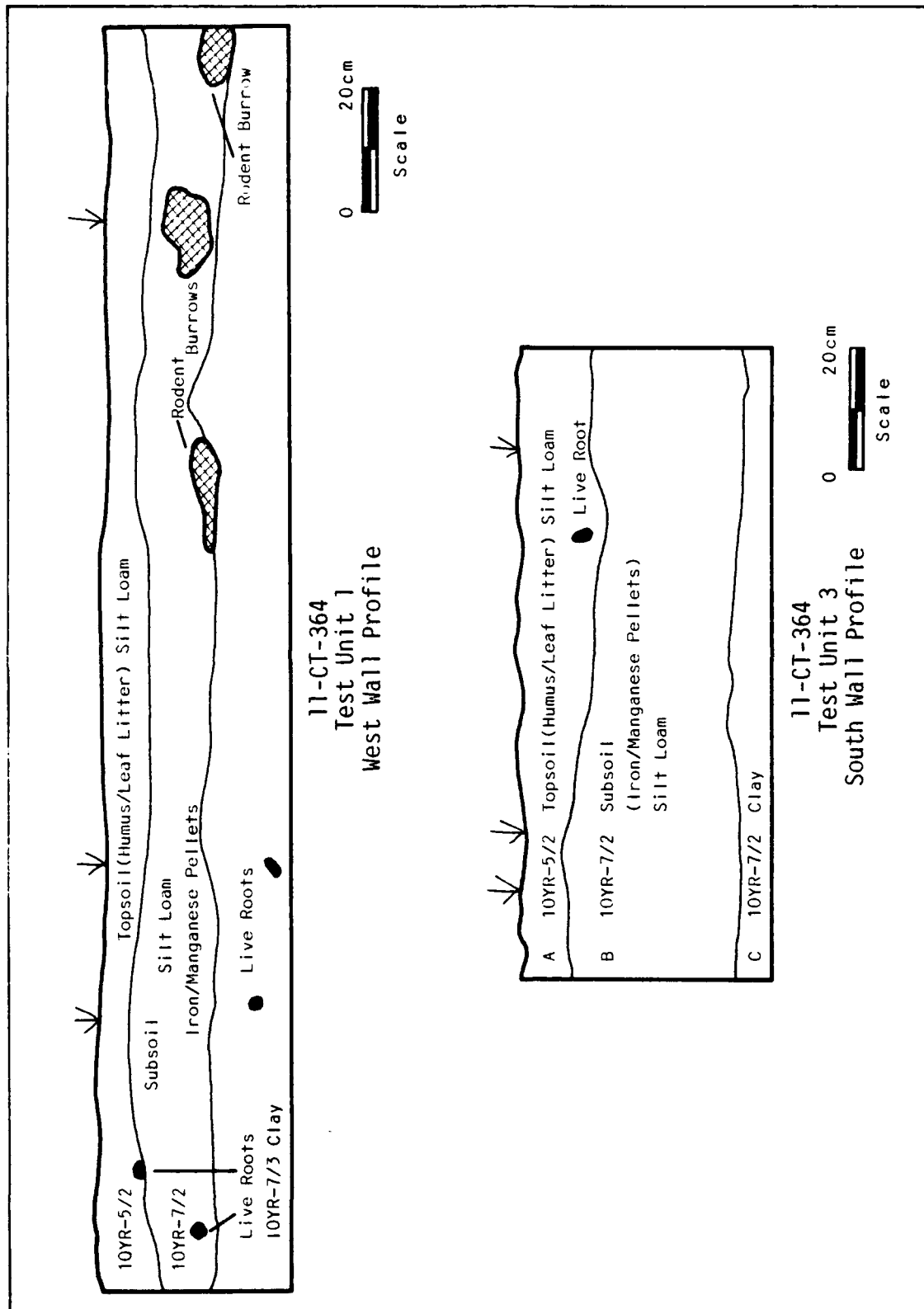


Figure 23. Profiles, 11-Ct-364

11-Ct-385

Four 1 m x 2 m and five 1 m x 1 m test units were excavated at this site. Test units 1, 4, and 5 were positioned over partially destroyed prehistoric features exposed in the wave-eroded bank of the ridge spur. The remaining units were distributed strategically over the ridge spur in order to determine the limits of the site. Depths of individual units ranged from 30 to 67 cm below ground surface (bs) (Figures 24 and 25).

The plow zone, present in all test units, consisted of a friable silt loam which changed to a more compact silt loam in the immediate subplow zone area (test unit levels 2) and to a blocky, silty clay by the time level 3 was reached in a unit.

Test unit 1 (1 m x 2 m, 0-64 cm bs) had a plow zone (levels 1 [0-20 cm bs] and 2 [20-30 cm bs]) containing large amounts of prehistoric lithic debitage, Late Woodland sherds, and other debris. A biface and a diagnostic biface fragment were recovered. At the base of the plow zone (approximately 30 cm bs), areas of culturally sterile matrix and midden were observed. This "midden" is the upper, indistinct portions of Feature 1 (described below) which was not clearly defined in plan view until 40 cm below the surface. Between 30 and 40 cm below the surface, the level 3 "midden" contained large quantities of debitage, Late Woodland ceramics, burned earth, and other debris; level 3 was dug to 35 cm below the surface and shovel-scraped in hopes of clearly defining the junction of the "midden" and sterile areas--this being impossible, the amorphous boundary was again mapped, and excavation of level 3 continued to 40 cm below the surface. At 40 cm, the limits of Feature 1 were distinct, and the feature was defined in plan view. Feature 1 extended to 64 cm below the surface.

Test unit 2 (1 m x 2 m, 0-40 cm bs) had a plow zone containing large quantities of prehistoric lithic debitage, Late Woodland sherds, a nondiagnostic biface, and a biface fragment. Some charcoal was noted. The second and final level of this unit contained a large amount of prehistoric lithic debitage, fewer Late Woodland sherds, and a nutting stone. All cultural materials within the second level were encountered in its upper portion, the floor being sterile.

The test unit 3 (1 m x 2 m, 0-30 cm bs) plow zone contained a large amount of prehistoric lithic debitage, moderate quantities of Late Woodland sherds, a nondiagnostic biface fragment, and a blade with secondary retouch. Matrix below the plow zone was culturally sterile.

Test unit 4 (1 m x 1 m, 0-45 cm bs) had a plow zone containing a large amount of prehistoric lithic debitage but moderate quantities of Late Woodland sherds. Feature 2 (described below) was defined at the base of the plow zone (27 cm bs). This feature extended to a depth of 45 cm below ground surface.

Test unit 5 (1 m x 2 m, 0-67 cm bs) had a plow zone containing a large quantity of prehistoric lithic debitage, Late Woodland sherds, and



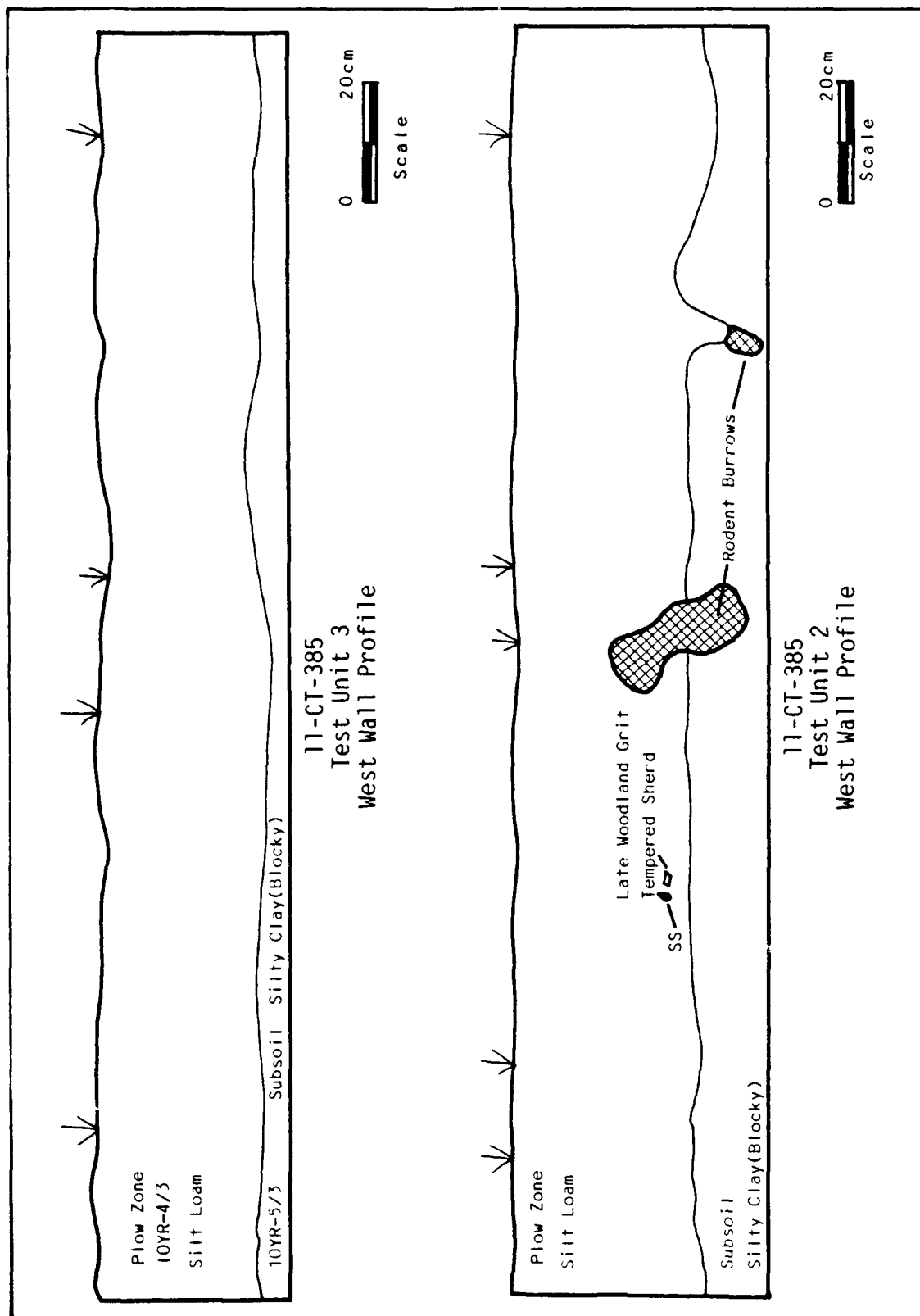


Figure 25. Profiles, 11-CT-385

one nondiagnostic biface fragment. A small amount of charcoal was noted. The second level contained a large amount of prehistoric lithic debitage and Late Woodland sherds as well as one diagnostic biface and some charcoal. A small quantity of prehistoric lithic debitage, Late Woodland sherds, and charcoal was noted within the third level. Feature 3 (described below) was defined within this level at 41 cm below ground surface. This feature extended to a depth of 67 cm below ground surface. A fourth level was initiated within the north 1/3 of this unit but was not completed due to the unstable nature of the eroded bank. A very small quantity of prehistoric lithic debitage was recovered from this level. A small extension of this test unit, positioned between the unit and the eroded bank, was excavated in three levels. A very small quantity of prehistoric lithic debitage was recovered from the first level. Succeeding levels were culturally sterile.

The test unit 6 (1 m x 1 m, 0-30 cm bs) plow zone contained a moderate amount of prehistoric lithic debitage, one Late Woodland sherd, and one undiagnostic biface fragment. Feature 4 was encountered at the base of the plow zone. A cross-section of this feature allowed identification as a rodent burrow. Matrix below the plow zone was culturally sterile.

Test unit 7 (1 m x 1 m, 0-31 cm bs) had a plow zone containing a moderate amount of prehistoric lithic debitage and several Late Woodland sherds. Matrix below the plow zone was culturally sterile.

Test unit 8 (1 m x 1 m, 0-31 cm bs) had a shallow plow zone containing a large amount of prehistoric lithic debitage. The second and final level of this unit was culturally sterile.

Test unit 9 (1 m x 1 m, 0-42 cm bs) had a plow zone containing a moderate amount of prehistoric lithic debitage and a small number of Late Woodland sherds. Succeeding levels contained a very small quantity of prehistoric lithic debitage.

Feature 1 (Figure 26). This feature was a flat-bottomed, basin-shaped pit. Initially defined at 40 cm below ground surface, its base was encountered at 64 cm below ground surface. Minimum dimensions are 160 cm long x 100 cm wide x 24 cm deep. Feature fill was removed in two 10 cm levels and one 4 cm level. Fill was homogenous, with some evidence of animal burrowing. Mussel shell fragments, charcoal, and burned earth were distributed throughout the fill. A large quantity of prehistoric lithic debitage was recovered as well as one diagnostic biface fragment and numerous Late Woodland sherds. A concentration of very fragile mussel shell (10-15 halves), 30 x 50 cm in area, was encountered at the base of the pit. Three 5 liter flotation samples were taken from the feature fill, one from each level (A.S.#1, 2, and 3).

Feature 2 (Figure 27). This feature was a shallow, basin-shaped pit. Initially defined at 27 cm below ground surface, its base was encountered at 45 cm below ground surface. Extant dimensions are 102 cm long x 80 cm wide x 18 cm deep. The north and south halves of the

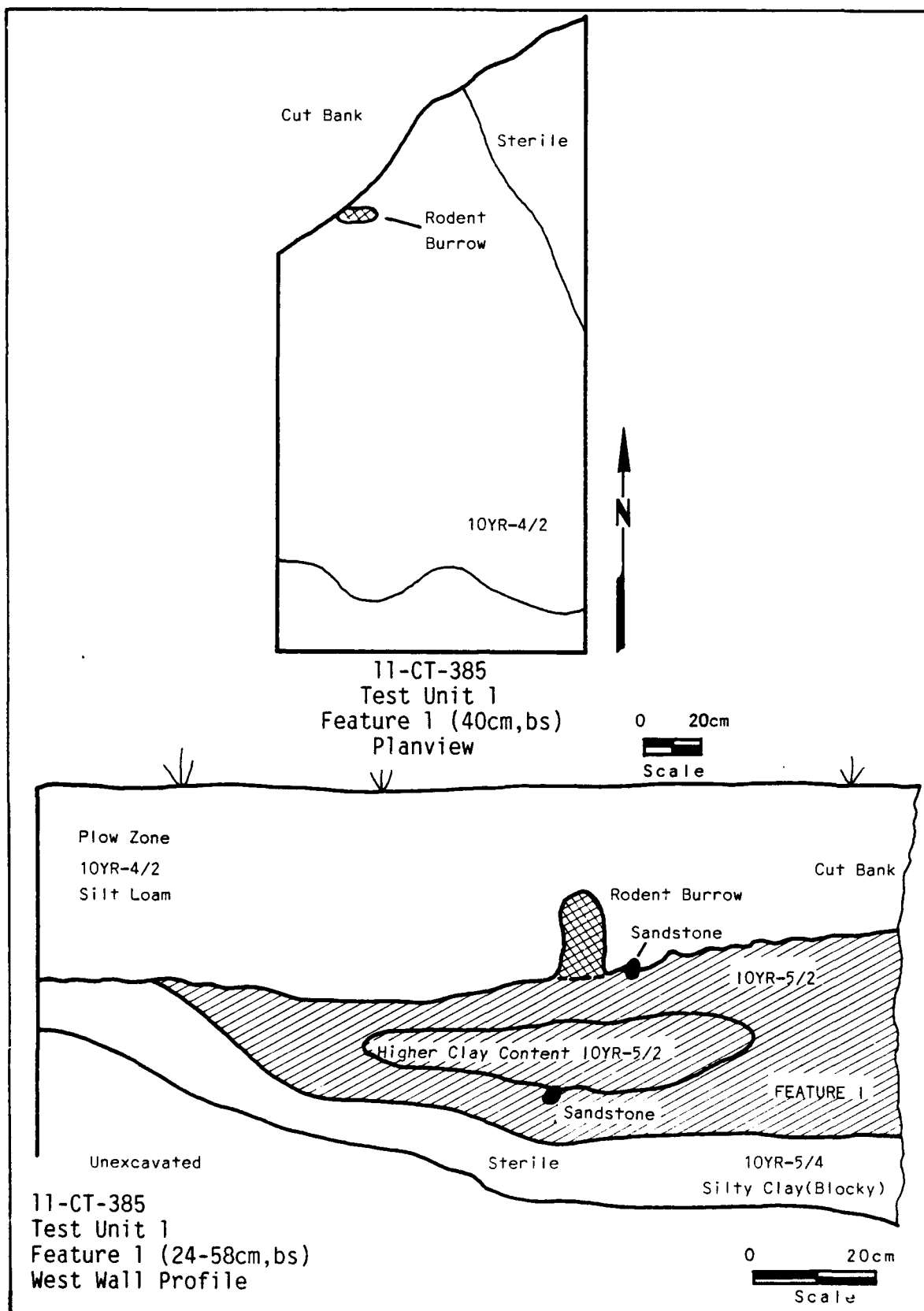


Figure 26. Plan View and Profile, 11-Ct-385

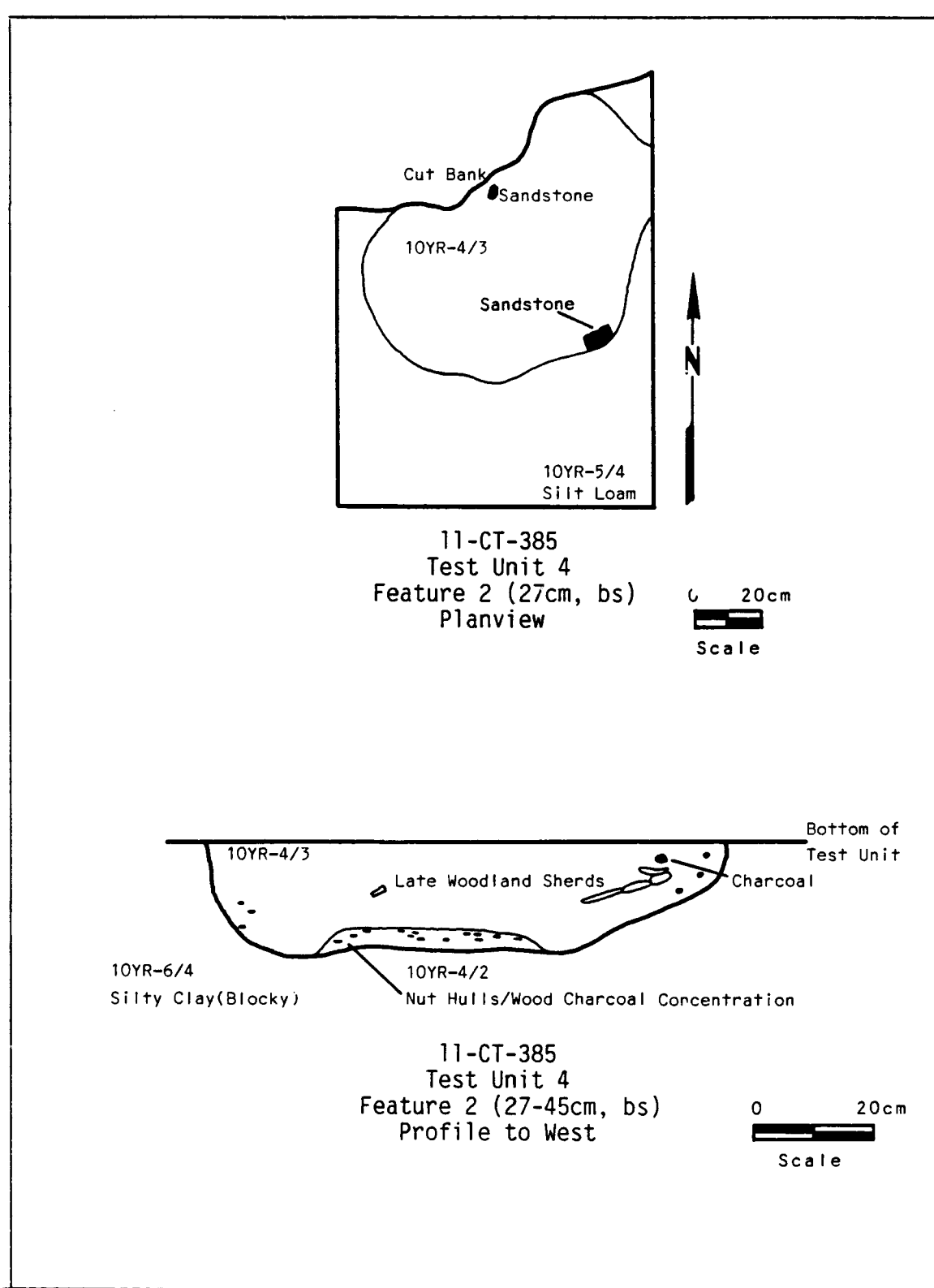


Figure 27. Plan View and Profile, 11-Ct-385



feature fill were removed separately. Fill contained charcoal, charred nut parts, burned earth, and a large quantity of prehistoric lithic debitage. Numerous Late Woodland sherds were recovered as well as one nutting/anvil stone. A 4-6 cm thick layer of charred nut hull, charcoal, and burned earth was encountered at the base of the pit. Two 5 liter flotation samples were taken from the feature fill, predominantly from the bottom of the pit (A.S.#4-1, N 1/2; A.S.#4-3, S 1/2). Wood charcoal was removed from the base of the pit for C-14 dating (A.S.#4-2, N 1/2 and S 1/2). The sample produced a radiocarbon age of  $1090 \pm 60$  years: A.D.  $860 \pm 60$  (Beta 14445).

Feature 3 (Figure 28). This feature was a flat-bottomed, oval-shaped pit with relatively straight sides. Initially defined at 41 cm below ground surface, its base was encountered at 67 cm below ground surface. Extant dimensions are 95 cm long x 60 cm wide x 26 cm deep. Feature fill was removed without separation into levels. Fill was homogenous, with some evidence of animal burrowing. A moderate quantity of prehistoric lithic debitage and Late Woodland sherds was recovered. One flotation sample was taken from the upper portion of the feature fill (A.S. #5-1).

#### 11-Ct-386

A 1 m wide profile (Figures 8 and 29) of the eroded ridge spur was prepared, after shovel and trowel scraping, in order to investigate the nature of subsurface burned areas and a buried soil horizon. In addition, a 10 m section of the area was photographed in 2 m-wide blocks, with close-up photographs of areas where recent fill or other recent disturbance could be readily documented. The buried soil horizon was found to contain charcoal, burned earth, and undecomposed wood. Soil above this horizon exhibited unconsolidated fill characteristics of a recent deposit. The entire profile was culturally sterile. The buried soil horizon had recently been plow zone and is the locus of brush burning. This was followed by the dumping of a considerable amount of fill on top of the original ground surface, another brush burning episode, and replacement of the topsoil. The small quantity of prehistoric lithic debitage noted at this site during Phase I investigations could have originated from the recently buried ground surface, plow zone, subsoil, or any of the fill materials. Fill in this area undoubtedly derived from the nearby excavation for a boat slip.

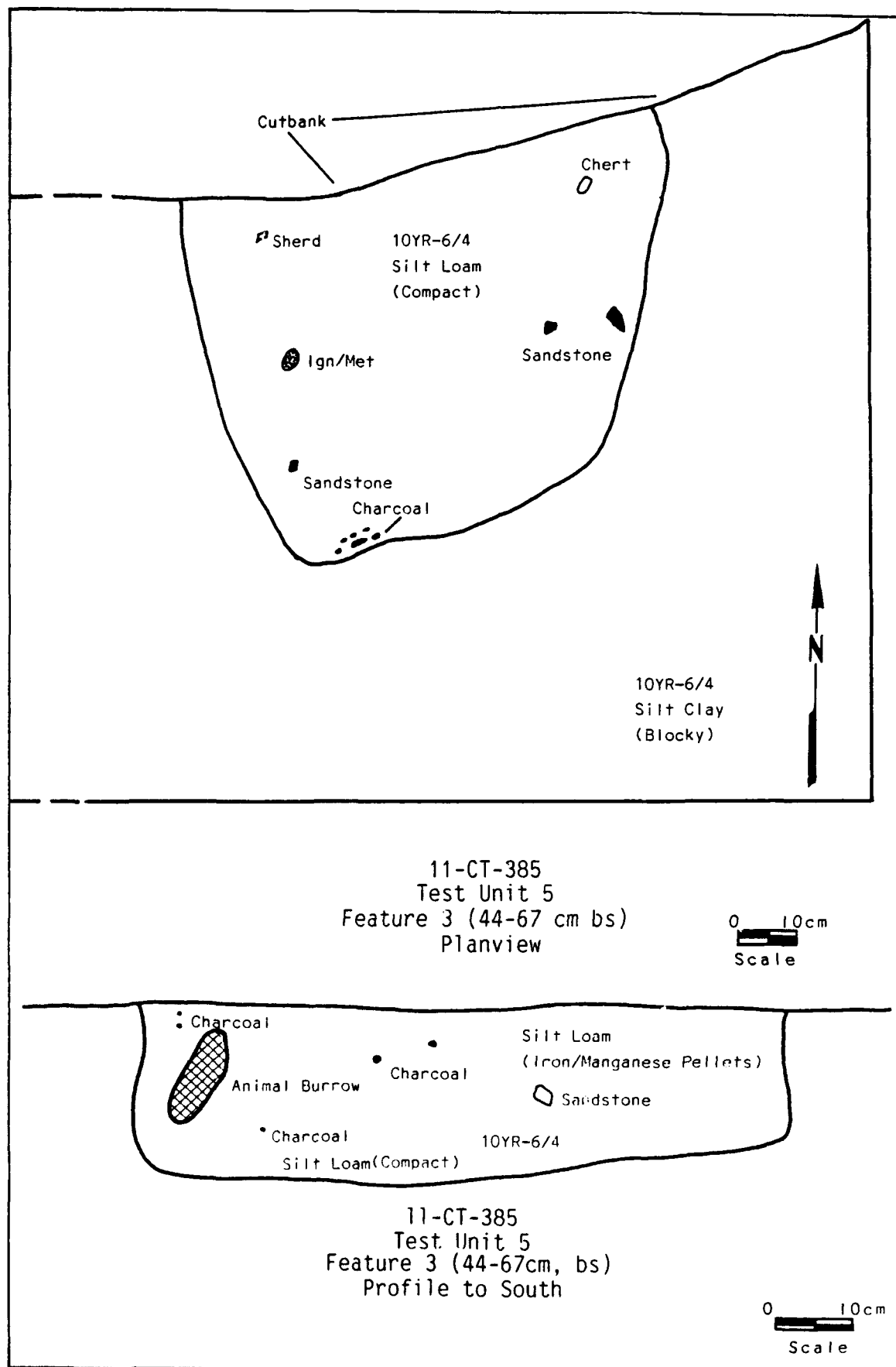


Figure 28. Plan View and Profile

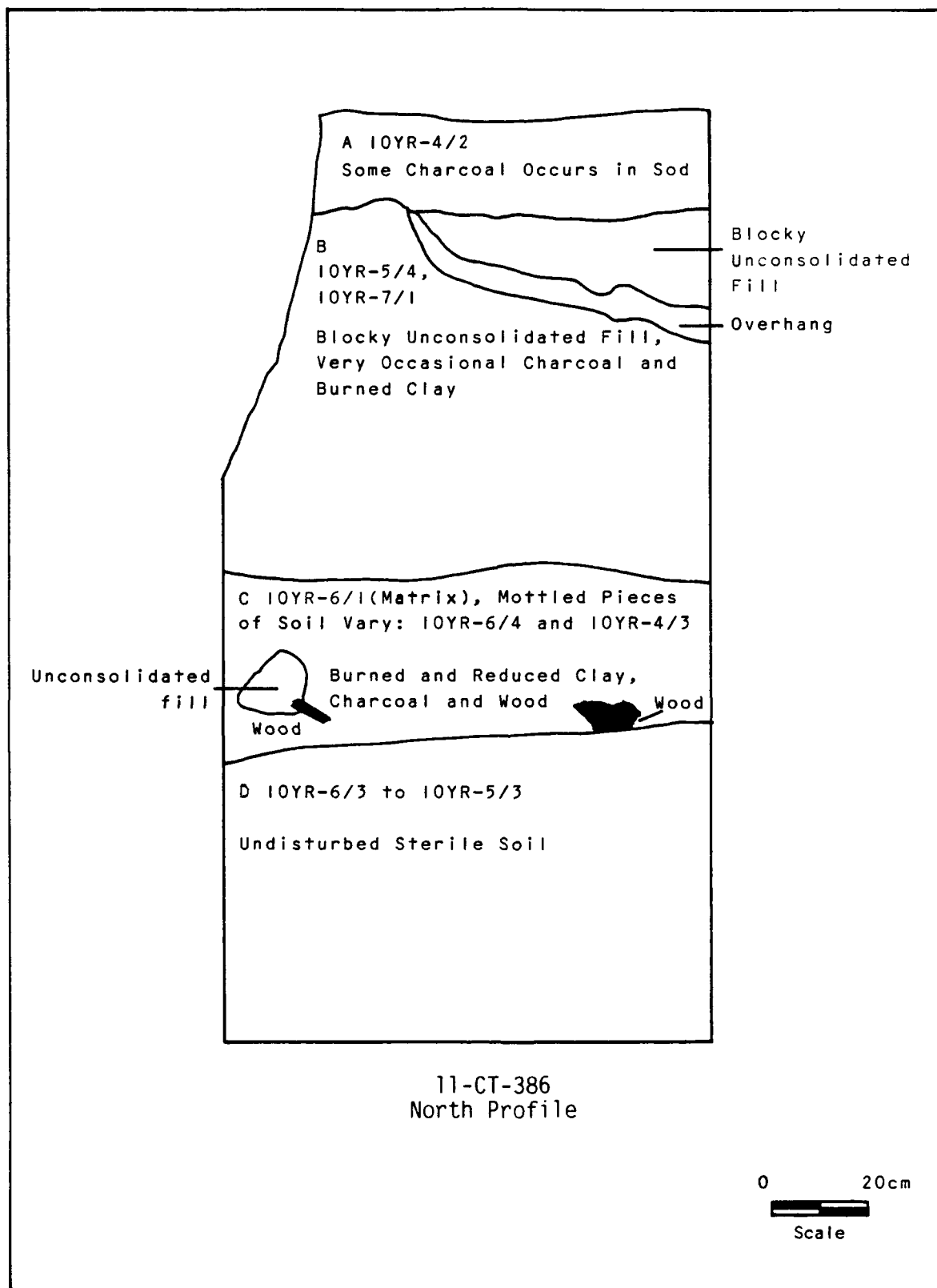


Figure 29. Profile, 11-Ct-386

## CHAPTER VI: ARTIFACT ANALYSIS

### Introduction

Upon completion of field work, all recovered cultural materials were processed in the laboratory of American Resources Group, Ltd. Prehistoric artifacts were analyzed by the author and Kathleen Cusick. Prehistoric ceramics were analyzed by Charles R. Moffat. Historic artifacts were analyzed by Jerry J. Moore. Floral and faunal remains were analyzed by William M. Cremin and Carl R. Falk, respectively.

### Methodology

#### Lithics

Lithics were subdivided into four major categories: lithic debitage, bifaces, unifaces, groundstone. Specimens were then sorted into raw material categories. Examination was made for obvious signs of use-wear, application of heat, and other forms of modification. Lithic debitage was classified according to the following categories:

Cores (shaped). Cobbles or pebbles exhibiting the patterned removal of flakes.

Cores (irregular). Cobbles or pebbles exhibiting irregular or nonpatterned removal of flakes.

Primary Flakes. Exhibit cortex over most of the dorsal surface.

Secondary Flakes. Same as above, but with flake scars on the dorsal surface and less cortex.

Tertiary Flakes. Exhibit flake scars on the dorsal surface, with no cortex present.

Bifacial Thinning Flakes. "... lack cortex on thin dorsal surfaces, but have sections of biface edges as striking platforms. The striking platform exhibits multiple facets and forms an acute angle with the ventral surface. A lip overhangs the ventral surface as well" (Hassen 1982:10).

Shatter. Blocky pieces of debitage without a bulb of percussion.

Unmodified and Heat-Fractured Stone. Stone exhibiting fractures possibly attributable to heat, as well as unmodified cobbles and pebbles with no outward signs of heat alteration.

### Prehistoric Ceramics

Prehistoric ceramics were examined for type of surface treatment, decoration, and temper. Morphological attributes were noted when possible.

### Historic Artifacts

Ceramics were inspected for manufacturer's marks and types of decoration after being subdivided into categories of stoneware, earthenware, and whiteware, described below:

Stoneware. A hard, dense, impervious, and thick-bodied ware often covered with a salt glaze is defined as stoneware. Stoneware is made of clays containing iron oxides and other fluxes and consequently is cream or brown in color.

Although stoneware has been manufactured in the United States since the seventeenth century, fragments recovered here date no earlier than the mid-nineteenth century. Manufacturer's marks may appear on stoneware as etchings in the wet clay with a glaze or simply as a glaze design.

Earthenware. A porous type of pottery characterized by a white or ivory colored paste and covered with a colored translucent glaze. The clays of earthenware contain flint and feldspar and are fired at temperatures between 1150° C (2100° F) and 1250° C (2280° F).

Whiteware. Whiteware is a refined earthenware with a white paste and a colorless glaze; it generally lacks the greenish and yellowish tints of creamware and was produced in a variety of shapes, styles, and motifs. Whiteware is perhaps one of the most common ceramic wares found throughout nineteenth century sites in the Midwest (Price 1981:26).

Glass artifacts were examined for manufacturer's marks and method of production. The following is a brief description of glass producing methods represented in the collections.

Automatic Bottle Making Method. Bottles produced by this method postdate 1903, when the Owens Automatic Bottle Making Machine was patented. The complete bottle was manufactured by this process, which left a very fine seam at the lip and base of the bottle (Moore and Burge 1981:72; Santeford 1981:62-63).

Three-Piece, Plate Bottom Mold Method. Bottles made by this method start in 1858, when the method was placed into commercial use by John Landis Mason. This method results in a round seam on the bottom from the mold with the main seam of the side of the bottle meeting at the circular base mark (Deiss 1981:56, 58).

## Results (Phase I, Delivery Order No. 4)

### Lithic Debitage

Sixteen pieces of debitage were recovered from two isolated find locales and two archaeological sites. Descriptive data is presented in Table 1.

### Bifaces

Twelve specimens were recovered from seven archaeological sites. Descriptive data is presented in Table 2. Selected specimens are illustrated in Figure 30.

### Groundstone

Five specimens were recovered from two isolated find locales and two archaeological sites. Descriptive data is presented in Table 3.

### Historic Artifacts

#### Locale 7 (Surface) (Appendix A:Figure 9)

- n=1 Rectangular medicine bottle, machine made, cork style. This bottle is a green aqua color, embossed RAWLEIGH'S TRADE MARK BOTTLE MADE IN U.S.A. A maker's mark was embossed on the bottom of the bottle. This consists of a P and the number 5. This mark is that of the Pierce Glass Co., St. Mary's, PA, from 1905 to 1912 and Hamburg, NY, from 1912 to 1917. The mark was used from 1905 to 1917. Pierce Glass Co. is now in Port Allegany, PA (Toulouse 1971:412).
- n=1 Rectangular medicine bottle, machine made, neck and shoulders missing. Manufactured post-1903, similar to the above-mentioned bottle and is blue aqua in color. RAWLEIGH'S is embossed on the front panel, as is TRADE MARK REG. U.S. PAT. OFF. and BOTTLE MADE IN U.S.A. A maker's mark was found on the bottom of the bottle. This is an I in a diamond and the number 9 and is of the Illinois Glass Co., Alton, Illinois. This mark was used from 1916 to 1929 (Toulouse 1971:264).
- n=1 Rectangular bottle, machine made post-1903, light blue aqua in color. The front panel is embossed RAWLEIGH'S. No maker's mark. The neck is missing.
- n=1 Rectangular bottle, clear glass. On the bottom of the bottle is THE. . .  
H.C. WHITMER  
CO.  
COLUMBUS, IND.
- n=1 Rectangular bottle, machine made, clear glass. The maker's mark on the bottom is a dot in a diamond and the number 7.



Actual Size

Figure 30. Chipped Stone Artifacts

The mark is that of the Illinois Glass Co. of Alton, Illinois. This mark was used from 1916 to 1929 (Toulouse 1971:264).

n=1 Small rectangular bottle, clear glass, embossed FRAZIER'S DISTEMPER REMEDY NAPPANEE, IND. Lettering was missing due to the bottle being broken and was reconstructed from similar bottles. A 2 is embossed on the bottom of the bottle. The bottle neck is made by the Improved tool-style and is corked stoped, ca. 1870s to 1915 (Deiss 1981:59, 94).

n=1 Bottom of a clear, round glass vessel, possibly a canning jar, embossed: KERR GLASS MFG. CO.

6  
PAT  
AUG. 31  
1916  
SAND SPRINGS, OKLA.

Marks on the bottom show that the vessel was made by the Kerr Glass Manufacturing Co. in Sand Springs, Oklahoma from 1912 to 1946. Kerr is still in business and is a major glass maker of canning jars (Toulouse 1971:306-9).

n=1 Oval, clear glass bottle bottom from a hard liquor or whiskey pint bottle. Bottle is stamped FULL PINT and is machine made.

n=1 Rectangular bottle of clear glass, embossed CAPITAL, machine made.

n=1 Brown beer bottle bottom, embossed with a B in a ring with the numbers 12, 20, 79. Machine made. The mark is that of the Brockway Glass Company, Inc., since 1933 (Toulouse 1971:59, 600).

n=1 Round, brown glass bottom. Maker's mark J.S.M. DRUG CO. The seam line points to manufacture by the automatic machine method, which dates after 1903.

n=1 Thick-walled bottom of a wine or champagne bottle with a "kick-up." The bottom edge is embossed with a diamond pattern on the edge. On the base of the body is embossed 750 ml. This mark shows it to be of recent manufacture.

n=1 Green aqua flint bottle bottom made by the three-piece plate-bottom mold method first used in 1858 (Deiss 1981:56).

n=2 Bottle necks, both of clear glass and machine made. One appears to be similar to a Rawleigh bottle described above.

n=1 Window glass fragment.

n=1 Brass 44 caliber gun shell marked V.P.T. 44.



- n=1 One lip and shoulder of a short, wide-mouth stoneware preserve jar or butter churn. The exterior is glazed white on the body; the shoulder is unglazed. The mouth is dark brown Albany slip glaze as is the interior (Ketchum 1983:52).

Locale 15 (Surface) (Appendix A:Figure 9)

- n=1 Very fractured rim and collar of a stoneware mixing bowl, brown glass interior, light clear exterior.

Locale 20 (Surface) (Appendix A:Figure 10)

- n=1 Stoneware body sherd with salt glazed exterior. Interior is unglazed but has dark brown glaze stains running down the vessel fragment.

Site 11-Ct-375 (Surface/shovel tests) Appendix A:Figure 7)

- n=1 Blue aqua glass body sherd.
- n=2 Whiteware fragment. One is the footed base of a plate; the other is a body sherd.
- n=1 Footed whiteware bowl fragment showing a ribbed body. A maker's mark was found on the bottom in black glaze:
- . . . KIN
  - . . . ORKS.
  - . . . NGLAND.

This mark is very similar to the one used by and for Alfred Meakin, Royal Ironstone China in England. The ware was made in Tunstall, Great Britain and established in 1881 (Kovel and Kovel 1953:155b).

- n=1 Fragment of a possible modern bottle neck.
- n=1 Small blue aqua glass fragment, possibly from a bottle or jar.
- n=2 Two small whiteware fragments.
- n=1 Stoneware rim and collar of a mixing bowl with unglazed exterior. The interior is glazed dark brown Albany slip. Deep dishes have collars similar to the bowls (Ketchum 1983:224).
- n=2 Very small clear glass fragments.
- n=2 Very small fractured whiteware body sherds.
- n=1 Clear body sherd, possibly from a jar or bottle.
- n=2 Window glass fragments.

- n=1 Rim of a small tumbler or jelly jar with a thick lip.
- n=1 Base of a whiteware bowl or saucer.
- n=1 Base of a possible canning jar, blue aqua in color. Embossed on the bottom is J.I.
- n=1 Small whiteware body sherd.
- n=1 Hoe blade with curved neck. The neck is riveted to the blade by three rivets, very rusted.

#### Results (Phase II, Delivery Order No. 6)

##### 11-Ct-34

Lithic Debitage. A total of 269 pieces of debitage was recovered. Numerical data for each test unit is presented in Tables 4-7.

Bifaces. One specimen was recovered. Descriptive data is presented in Table 8. This specimen is illustrated in Figure 31.

Prehistoric Ceramics. A total of 143 sherds was recovered. One thick, smoothed-over, cordmarked body sherd with grit temper was noted. This may be of Middle Woodland affiliation. Eighty Late Woodland body sherds were represented. Sixty two Mississippian sherds were recovered, of which five are rim sections. One of these rim sherds has an everted, smoothed plainware lip, flattened, with a line of cord impressions running parallel to it (Figure 32:a). Two rim sherds have rounded lips and were probably from smoothed plainware jars. One molded rim came from a miniature vessel. One rim sherd had a flattened lip and weathered exterior surface. One Oneota sherd was found. This is possibly a shoulder segment. A horizontal line of punctations runs around the shoulder. Vertical cordmarking occurs on one side of these punctations, while trailing is noted on the other side (Figure 32:b). Sherd frequencies for each test unit are presented in Tables 9-11.

##### 11-Ct-309

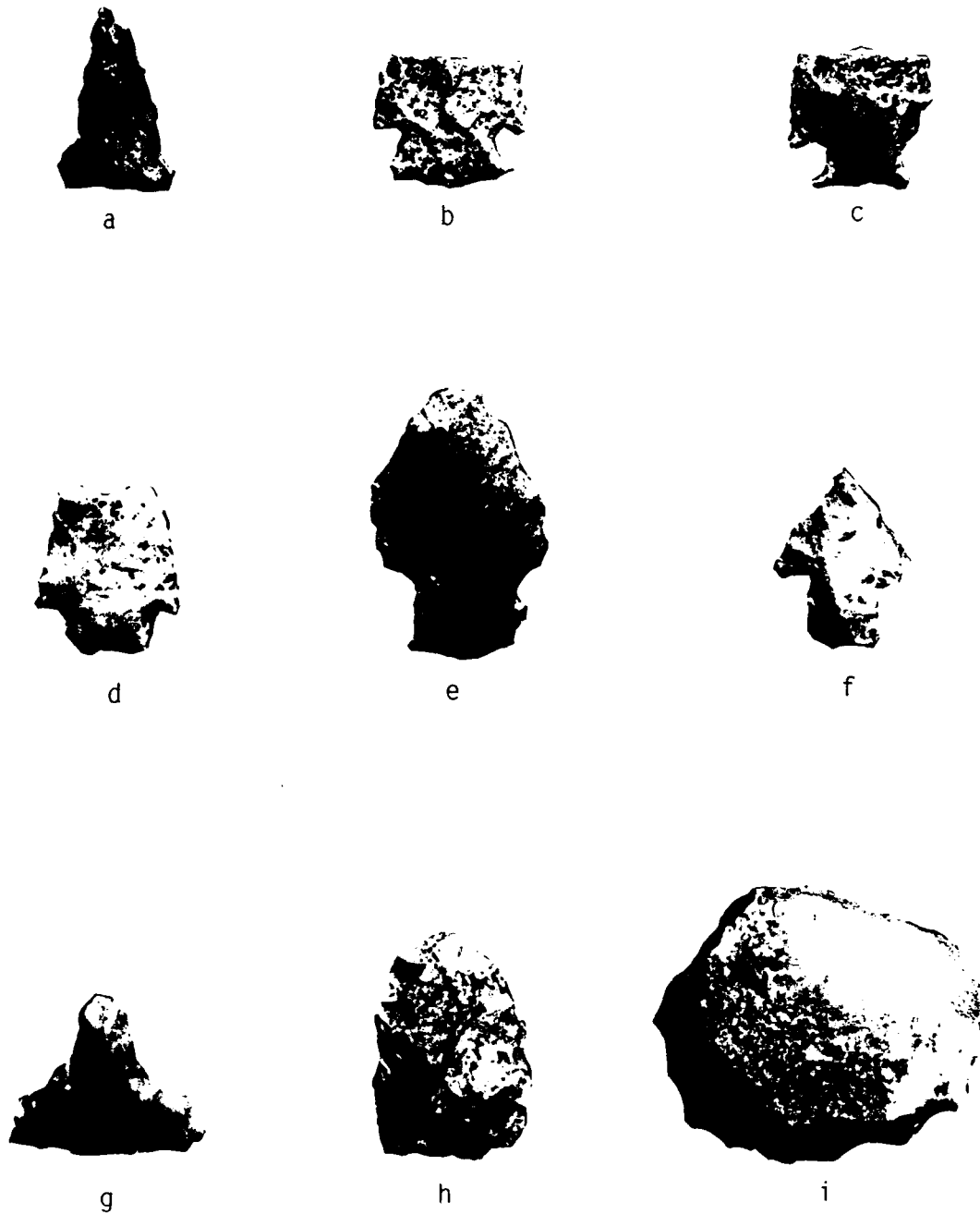
Lithic Debitage. A total of 38 pieces of debitage was recovered. Numerical data for each test unit is presented in Tables 12-15.

##### 11-Ct-364

Lithic Debitage. A total of 135 pieces of debitage was recovered. Numerical data for each test unit is presented in Tables 16-19.

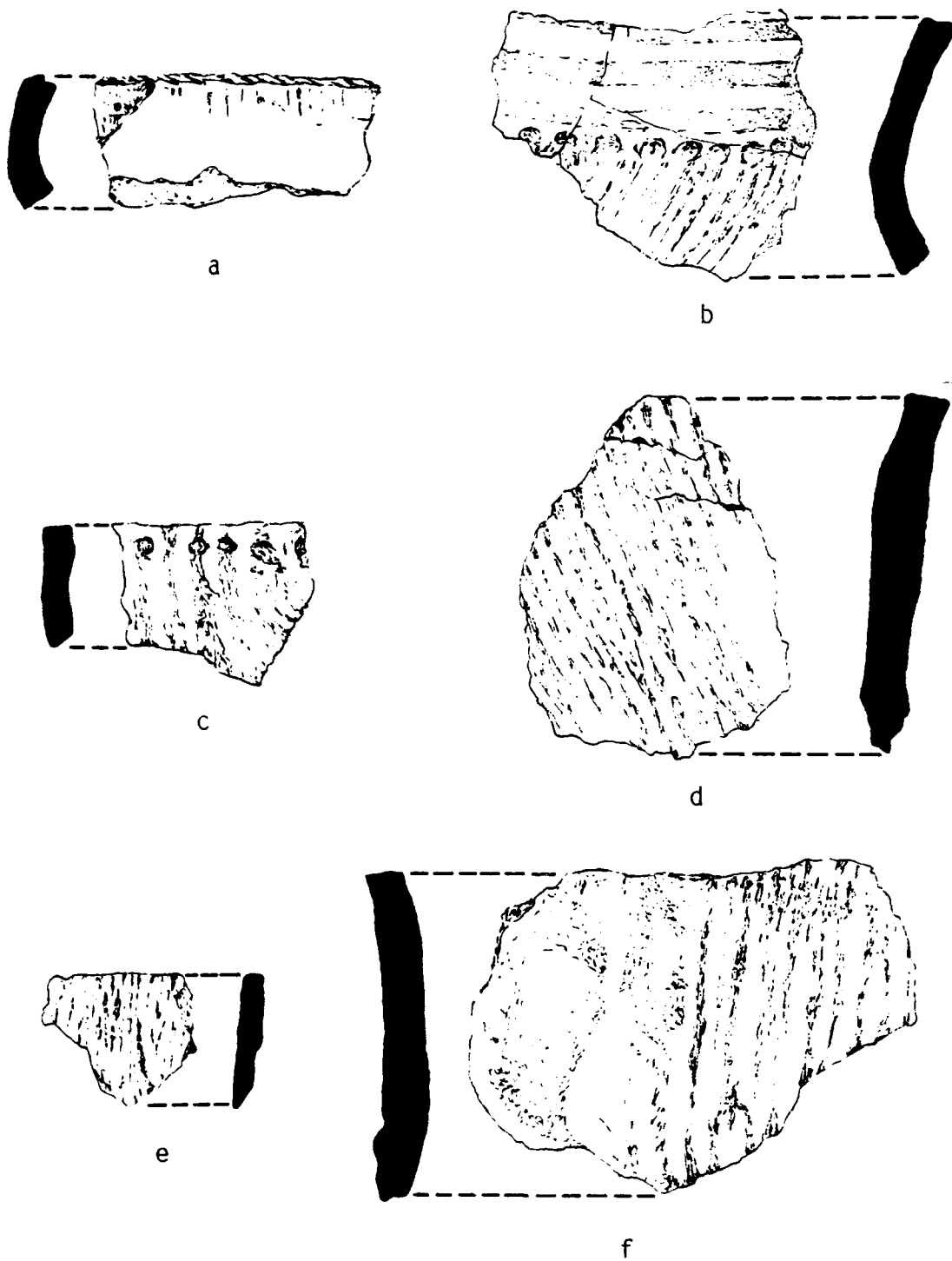
Bifaces. Two specimens were recovered. Descriptive data is presented in Table 8. Illustrations are provided in Figure 31.

Prehistoric Ceramics. Three sherds were recovered. Woodland body sherds were recovered from test unit 2, level 1. Both are grit



Actual Size

Figure 31. Chipped Stone Artifacts



Actual Size

Figure 32. Ceramics

tempered; one specimen is smoothed-over cordmarked and the other has a weathered surface. One grit-tempered, weathered body sherd was found on the ground surface. This was only identifiable as Woodland. These are not presented in tables.

### Historic Artifacts

#### Test Unit 2

n=1 Earthenware plate bottom. This has a white exterior glaze with a green glazed, unidentifiable maker's mark. The interior is green "sponge" glaze over white. Sponge ware is sometimes called spatterware. This ware came into use in the 1830s, lasting up to the 1850s and 1860s (Price 1981:37-38).

n=6 unidentifiable metal

n=9 roof shingles

#### 11-Ct-385

Lithic Debitage. A total of 1,559 pieces of debitage was recovered. Numerical data for each test unit is presented in Tables 20-23.

Bifaces. Ten specimens were recovered. Descriptive data is presented in Table 8. Selected specimens are illustrated in Figure 31.

Unifaces. One specimen was recovered. Descriptive data is presented in Table 24.

Groundstone. Five specimens were recovered. Descriptive data is presented in Table 25.

Prehistoric Ceramics. A total of 586 sherds was recovered. Nine weathered, grit-tempered body sherds were only identifiable as Woodland. One of these came from feature 3 fill; the others came from test unit 1, level 1. Two body sherds from test unit 1, level 2, may be of Middle Woodland affiliation. One of these is thick, grit tempered, and cordmarked; the other is grit tempered with weathered surfaces. These sherds of questionable affiliation are not presented in the tables. Late Woodland is represented by 575 sherds. Seven of these are rim sections. Three rim sherds have vertical cordmarking extending up to a flattened lip (Figure 32c-d). Two rim sherds from a straight rim jar have cordmarking extending up to a flattened lip (Figure 32:e-f). Another rim sherd has vertical cordmarking extending up to an unsmoothed lip. One rim sherd has cordmarking extending up to a flat lip. The upper 1.5 cm of the wall below the lip was thinned relative to the body. Sherd frequencies for each test unit are presented in Tables 26.

## Flotation Samples

### Test Unit 1, Feature 1

A.S.#1 (5 liter)

<u>Material</u>	<u>Count</u>	<u>Weight(g)</u>
charcoal	150+	5.1
charred nut	16	1.5
bone	50+	12.0
mussel shell	31	25.5
burned earth	22	4.0
lgn/met. rock	6	49.1

A.S.#2 (5 liter) (50-60 cm bs)

<u>Material</u>	<u>Count</u>	<u>Weight(g)</u>
charcoal	500+	23.0
charred bone?	100+	7.5
snail shell	15	0
mussel shell	50+	6.0
chert flakes	5	0.5
burned earth and clay	100+	114.0
unident. rock	12	17.5

A.S.#3 (5 liter) (60-70 cm bs)

<u>Material</u>	<u>Count</u>	<u>Weight(g)</u>
charcoal	20+	5.2
charred nut	20+	4.0
bone	25+	1.5

mussel shell	26+	42.4
lgn/met. rock	12	109.8

Test Unit 4, Feature 2

A.S.#4-1 (5 liter) (27 cm bs)

<u>Material</u>	<u>Count</u>	<u>Weight(g)</u>
charcoal	100	8.0
charred nut	1	1.0
bone	4	0
mussel shell	9	0.8
chert flakes and shatter	8	3.2
unident. rock	16	99.5

A.S.#4-3

<u>Material</u>	<u>Count</u>	<u>Weight(g)</u>
charcoal	300+	10.0
charred bone/ wood	300+	17.2
mussel shell	?	8.2
charred nut	4	0.5
charred seed	1	0.4
burned earth and clay	100+	50.7
chert flakes	25	4.0
unident. rock	30	15.5

Test Unit 5, Feature 3

A.S.#5-12 (10 liter) (40-50 cm bs)

<u>Material</u>	<u>Count</u>	<u>Weight(g)</u>
charcoal	11	0.3
charred nut	25+	1.5
charred seed	20+	0.5
Ign/met. rock	4	6.5 g

Test Unit 1

Faunal sample Lot #3 (30-40 cm bs)

<u>Material</u>	<u>Count</u>	<u>Weight(g)</u>
bone	1	3.5

Faunal sample Lot #4 (Feature 1, 40-50 cm bs)

mussel shell	?	23.0
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11-Ct-386

Cultural materials were not recovered at this site during Phase II investigation.



Table 1. Phase I Shovel Tests: Lithic Debitage  
Frequency/Weight (g)

Provenience	Category	Material	Weight
Locale 8	Primary flakes (n=1)	Unidentified Chert	2.8
Locale 14	Unmodified and heat-fractured stone (n=7)	Igneous/Metamorphic	80.2
	Shatter (n=3)	Unidentified Chert	1.6
	Tertiary Flakes (n=1)	Unidentified Chert	0.1
11-Ct-375	Unmodified and heat-fractured stone (n=2)	Igneous/Metamorphic	68.3
11-Ct-388	Unmodified and heat-fractured stone (n=1)	Igneous/Metamorphic	20.3
	Tertiary Flakes (n=1)	Burlington Chert	1.9

Table 2. Chipped Stone Artifacts - Bifaces, Phase I

Provenience	Type/ Description	Chert Type	Max. Length (mm)	Max. Width (mm)	Max. Thickness (mm)	Weight (g)	Suggested Function	Cultural Affiliation
Site 11-Ct-83:								
Surface	Godar side-notched (proximal fragment)	Unident.†	27.1*	52.0*	5.9*	7.3	Projectile point/ knife	Middle Archalc
Surface	Nondlag. (proximal fragment)	Burlington	-	-	-	2.4		-
Site 11-Ct-309:								
Surface	Unnamed side-notched	Cobden	38.4*	29.1	7.2	8.1	Projectile point/ knife	Middle Archalc
Site 11-Ct-364:								
Surface	Matanzas side-notched	Mill Creek	29.2*	19.7	7.1	4.1	Projectile point knife	Middle Archalc
Surface	Low flared base (prox. fragment)	Burlington	23.2*	23.1	7.4	5.1	Projectile point/ knife	Late Woodland
Site 11-Ct-382:								
Surface	Unident.	Unident.	39.0*	18.4	9.8	7.0	Projectile point/ knife	-

\* extant

† thermally altered

Table 2. (Cont'd)

Provenience	Type/ Description	Chert Type	Max. Length (mm)	Max. Width (mm)	Max. Thickness (mm)	Weight (g)	Suggested Function	Cultural Affiliation
Site 11-Ct-384:								
Surface	Nondlag. biface	Burlington+	80.6	39.1	14.0	39.1	Knife/blank	-
Surface	Nondlag. (distal fragment)	Mill Creek+	33.3*	19.7*	6.7	3.5	Projectile point	-
Surface	Nondlag. (proximal fragment)	Burlington	-	-	-	0.8	Drill	-
Surface	Nondlag. fragment	Unident.+	32.2*	24.7*	6.6	4.9	Blank	-
Site 11-Ct-388:								
Shovel Test	Nondlag. fragment	Burlington	28.8*	29.3*	9.8*	7.2		-
Site 11-Ct-390:								
Surface	Nondlag. (distal fragment)	Kaolin+	37.7*	23.0*	5.6*	5.4	Projectile point	-

Table 3. Phase I Survey/Shovel Tests: Groundstone

Provenience	Material	Weight (g)	Function
Locale 2 (Surface)	Igneous/Metamorphic	973.0	Nutting Stone
Locale 20 (Shovel Test)	Igneous/Metamorphic	510.3	?
	Igneous/Metamorphic	424.3	?
11-Ct-83 (Surface)	Igneous/Metamorphic	578.0	Nutting Stone
11-Ct-383 (Surface)	Igneous/Metamorphic	480.0	Nutting Stone

Table 4. Site 11-Ct-34, Phase II: Lithic Debitage Frequency/Weight (g)

Debitage Category	Test Unit 1			Test Unit 2			Grand Total		
	Surface	Level 1	Level 2	Level 1	Level 2	Level 3	Total	Total	All Units
Cores (Shaped)	-	-	-	-	-	-	-	-	-
Cores (Irregular)	-	1 10.3	-	-	-	-	1 10.3	-	1 10.3
Primary Flakes	1 7.8	-	-	-	-	-	1 7.8	-	1 7.8
Secondary Flakes	1 3.3	2 11.4	2 2.9	-	-	-	5 17.6	-	5 17.6
Tertiary Flakes	2 17.2	1 1.5	1 9.9	-	-	-	4 28.6	-	4 28.6
Bifacial Thinning Flakes	-	-	-	-	-	-	-	-	-
Hoe Flakes	-	1 2.3	-	-	-	-	1 2.3	-	1 2.3
Shatter	-	9 88.9	4 8.8	-	2 5.0	-	13 97.7	5 12.2	18 109.9
Unmodified and Heat-Fractured Stone	19 359.7	143 834.4	29 296.6	-	3 17.6	-	191 1490.7	48 431.0	239 1921.7
TOTAL	23 388.0	157 948.8	36 318.2	-	5 22.6	-	216 1655.0	53 443.2	269 2098.2

Table 5. Site 11-Ct-34, Phase 11: Lithic Debltage Material Types by Weight (g)

Category	-----Test Unit 1-----				-----Test Unit 2-----				Grand Total All Units
	Surface	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Cobden	-	-	-	-	-	-	-	-	-
Mill Creek	14.1	45.1	-	-	59.2	-	-	-	59.2
Kinkaid	-	-	-	-	-	-	-	-	-
Burlington	-	26.1	9.9	-	36.0	-	-	-	36.0
Kaolin	-	5.4	-	-	5.4	-	-	-	5.4
Ign/Met.	276.4	567.6	273.9	-	1117.9	382.9	7.7	-	390.6
Sandstone	16.4	42.1	-	-	58.5	14.1	-	-	14.1
Limestone	66.9	214.2	22.7	-	303.8	16.4	9.9	-	26.3
Unidentified	14.2	48.3	11.7	-	74.2	7.2	5.0	-	12.2
TOTAL	388.0	948.8	318.2	-	1655.0	420.6	22.6	-	443.2
									2098.2

Table 6. Site 11-Ct-34, Phase 11: Lithic Deblitage - Retouched/Utilized vs. Unmodified

Category	-----Test Unit 1-----				Total	-----Test Unit 2-----				Total	Grand Total All Units
	Surface	Level 1	Level 2	Level 3		Level 1	Level 2	Level 3			
Retouched/ Utilized*	1	1	-	-	2	-	-	-	-	2	
Unmodified	22	156	36	-	214	48	5	-	53	267	
Total	23	157	36	-	216	48	5	-	53	269	

\* This category does not include specimens with extensive unifacial or bifacial retouch.

Table 7. Site 11-Ct-34, Phase 11: Lithic Deblitage\* - Thermally Altered vs. Unaltered

Category	-----Test Unit 1-----					-----Test Unit 2-----				Grand Total All Units
	Surface	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	
Thermally Altered	3	8	6	-	17	3	2	-	5	22
Unaltered	1	6	1	-	8	-	-	-	-	8
Total	4	14	7	-	25	3	2	-	5	30

\* Excluding unmodified and heat-fractured stone category.

Table 8. Phase II Chipped Stone Artifacts - Bifaces

Provenience	Type/ Description	Chert Type	Max. Length (mm)	Max. Width (mm)	Max. Thickness (mm)	Weight (g)	Suggested Function	Cultural Affiliation
Site 11-Ct-34:								
Surface (Mussel Shell Concentration)	Madison Triangular	Unident.	27.3	17.4	4.0	1.5	Projectile point	Mississippian
Site 11-Ct-364:								
Surface	Nondlag. (proximal fragment)	Kaolin	-	-	-	1.3		-
Test Unit 2 Level 3	Nondlag. fragment	Burlington	-	-	-	3.4		-
Site 11-Ct-385:								
Surface	Unnamed Corner- notched (proximal fragment)	Burlington	20.8*	21.2*	5.6	2.1	Projectile point	L. Woodland
Surface	Unident.	Mill Creek?+	40.7	26.0	7.7	8.8	Projectile point/ knife	-
Test Unit 1 Level 1	Unnamed Corner- notched (proximal fragment)	Unident.+	19.2*	23.1	5.8	2.3		L. Woodland

\* extant

+ thermally altered



Table 8. (Cont'd)

Provenience	Type/ Description	Chert Type	Max. Length (mm)	Max. Width (mm)	Max. Thickness (mm)	Weight (g)	Suggested Function	Cultural Affiliation
Site 11-Ct-385:								
Test Unit 1 Level 1	Nondlag.	Mill Creek	33.2	23.8	8.0	5.4	Blank	-
Test Unit 1 Feature 1	Unident. stemmed	Kaolin?+	27.3	20.8*	4.9	2.4	Projectile point/ drill	-
Test Unit 2 Level 1	Expanded base	Kaolin?+	23.8*	29.1	6.6	3.0	Drill	-
Test Unit 3 Level 1	Nondlag. (proximal fragment)	Burlington	27.9*	33.2	8.0	10.1	Blank	-
Test Unit 5 Level 1	Nondlag. (distal frag.)	Mill Creek+	24.6*	15.3*	3.9	1.2	Projectile point	-
Test Unit 5 Level 2	Unident. stemmed (proximal) fragment)	Burlington	24.1*	21.1	5.6	3.6	Projectile point	-
Test Unit 6 Level 1	Nondlag. fragment	Unident.+	-	-	-	2.1		-

Table 9. Site 11-Ct-34, Phase II: Sherd Frequencies,  
Late Woodland Ceramics

Category	Surface (Mussel Shell Concentration)	-----Test Unit 1-----			Total
		Surface	Level 1	Level 2	
Smoothed Plainware	2+	-	10+ 1*	1+	14
Cordmarked	12+	3+	21+	2+	38
Smoothed-over Cordmarked	1+	2+	14+	-	17
Weathered	-	-	9+	2+	11
Total	15	5	55	5	80

+ Grit Temper

\* Grog Temper

Table 10. Site 11-Ct-34, Phase II: Sherd Frequencies,  
Mississippian Ceramics

Category	Surface (Mussel Shell Concentration)	-----Test Unit 1-----			Test Unit 2 Level 1	Total
		Surface	Lev.1	Lev.2		
Exterior Red-Filmed and Smoothed	1+	-	-	-	-	1
Smoothed Plainware	4+ 2*	2+	2++ <sup>R</sup> 26++	1+	1+	38
Smoothed Plainware Cord-Imprinted Lip	-	1+ <sup>R</sup>	-	-	-	1
Cordmarked	2+	2*	3++	-	-	7
Miniature Vessel	-	-	1++ 1++ <sup>R</sup> 1++ <sup>B</sup>	-	-	3
Weathered	-	1+	9++	1+ <sup>R</sup>	-	11
Total	9	6	44	2	1	62

Table 11. Site 11-Ct-34, Phase II: Oneota Ceramics

Category	Surface (Mussel Shell Concentration)	-----Test Unit 1-----			Test Unit 2 Level 1	Total
		Surface	Lev.1	Lev.2		
Punctated Cord- Marked with Trailing	1*	-	-	-	-	1

+ Shell Temper  
++ Shell Temper with Sandy Paste  
\* Shell and Grog Temper  
R Rim Sherd  
B Base

Table 12. Site 11-Ct-309, Phase 11: Lithic Debitage Frequency/Weight (g)

Debitage Category	Test Unit 1					Test Unit 2					Grand Total	
	Lev.1	Lev.2	Lev.3	Lev.4	Lev.5	Total	Lev.1	Lev.2	Lev.3	Lev.4	Total	All Units
Cores (Shaped)	-	-	-	-	-	-	-	-	-	-	-	-
Cores (Irregular)	-	-	-	-	-	-	-	-	-	-	-	-
Primary Flakes	-	-	-	-	-	-	-	-	-	-	-	-
Secondary Flakes	-	1	-	-	-	1	-	-	-	-	-	1
	-	3.5	-	-	-	3.5	-	-	-	-	-	3.5
Tertiary Flakes	-	-	-	-	-	-	5	-	-	-	5	5
	-	-	-	-	-	-	9.2	-	-	-	9.2	9.2
Bifacial Thinning Flakes	-	-	-	-	-	-	-	-	-	-	-	-
Shatter	-	1	-	-	-	1	2	1	-	-	3	4
	-	0.6	-	-	-	0.6	11.1	3.3	-	-	14.4	15.0
Unmodified and Heat-Fractured Stone	2	7	-	-	-	9	18	-	-	1	19	28
	2.0	41.2	-	-	-	43.2	437.6	-	-	1.8	439.4	482.6
TOTAL	2	9	-	-	-	11	25	1	-	1	27	38
	2.0	45.3	-	-	-	47.3	457.9	3.3	-	1.8	463.0	510.3

Table 13. Site 11-Ct-309, Phase 11: Lithic Debitage Material Types by Weight (g)

Category	Test Unit 1					Test Unit 2					Grand Total	
	Lev.1	Lev.2	Lev.3	Lev.4	Lev.5	Total	Lev.1	Lev.2	Lev.3	Lev.4	Total	All Units
Cobden	-	0.6	-	-	-	0.6	3.4	-	-	-	3.4	4.0
Mill Creek	-	-	-	-	-	-	-	-	-	-	-	-
Kinkaid	-	-	-	-	-	-	-	-	-	-	-	-
Burlington	-	3.5	-	-	-	3.5	11.1	3.3	-	-	14.4	17.9
Kaolin	-	-	-	-	-	-	5.8	-	-	-	5.8	5.8
Ign/Met.	2.0	41.2	-	-	-	43.2	437.6	-	-	1.8	439.4	482.6
Sandstone	-	-	-	-	-	-	-	-	-	-	-	-
Limestone	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	2.0	45.3	-	-	-	47.3	457.9	3.3	-	1.8	463.0	510.3

Table 14. Site 11-Ct-309, Phase II: Lithic Debitage - Retouched/Utilized vs. Unmodified

Category	-----Test Unit 1-----					-----Test Unit 2-----					Grand Total	
	Lev.1	Lev.2	Lev.3	Lev.4	Lev.5	Total	Lev.1	Lev.2	Lev.3	Lev.4	Total	All Units
Retouched/ Utilized	-	-	-	-	-	-	-	-	-	-	-	-
Unmodified	2	9	-	-	-	11	25	1	-	1	27	38
Total	2	9	-	-	-	11	25	1	-	1	27	38

Table 15. Site 11-Ct-309, Phase II: Lithic Debitage\* - Thermally Altered vs. Unaltered

Category	-----Test Unit 1-----					-----Test Unit 2-----					Grand Total	
	Lev.1	Lev.2	Lev.3	Lev.4	Lev.5	Total	Lev.1	Lev.2	Lev.3	Lev.4	Total	All Units
Thermally Altered	-	-	-	-	-	-	2	-	-	-	2	2
Unaltered	-	2	-	-	-	2	5	1	-	-	6	8
Total	-	2	-	-	-	2	7	1	-	-	8	10

\*excluding unmodified and heat-fractured stone category

Table 16. Site 11-Ct-364, Phase II: Lithic Debitage Frequency/Weight (g)

Debitage Category	Test Unit 1			Test Unit 2			Test Unit 3			Test Unit 4			Total
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	
Cores (Shaped)	-	-	-	-	-	-	-	-	-	-	-	-	-
Cores (Irregular)	-	-	-	-	-	-	-	-	1	-	-	1	27.7
Primary Flakes	-	-	-	-	-	-	-	-	-	-	-	-	-
Secondary Flakes	1	-	1	2	-	-	-	-	-	-	-	-	-
	6.0		1.4	7.4									
Tertiary Flakes	-	1	-	1	-	-	-	2	-	-	-	2	2.7
		1.2		1.2				2.7					
Bifacial Thinning Flakes	-	-	-	-	-	-	-	-	-	-	-	-	-
Shatter	3	2	1	6	4	1	4	1	1	1	1	1	27.5
	18.6	4.1	6.9	29.6	16.3	4.7	16.3	4.7	3.4	3.1	3.1	3.1	
Unmodified and Heat-fractured Stone	13	20	6	39	23	16	23	16	20	-	-	59	703.6
	77.1	255.0	98.2	430.3	309.4	147.0	309.4	147.0	247.2				
TOTAL	17	23	8	48	27	19	27	19	22	1	1	69	
	101.7	260.3	106.5	468.5	325.7	154.4	325.7	154.4	278.3	3.1	3.1	761.5	

Table 16. (cont'd)

Debitage Category	-----Test Unit 3-----				-----Test Unit 4-----				Grand Total All Units
	Level 1	Level 2	Level 3	Level 4 Total	Level 1	Level 2	Level 3	Total	
Cores (Shaped)	-	-	-	-	-	-	-	-	-
Cores (Irregular)	-	-	-	-	-	-	-	-	1 27.7
Primary Flakes	-	-	-	-	-	-	-	-	-
Secondary Flakes	-	-	-	-	-	-	-	-	2 7.4
Tertiary Flakes	-	-	1 1.1	-	1 1.1	-	-	-	4 5.0
Bifacial Thinning Flakes	-	-	-	-	-	-	-	-	-
Shatter	-	-	1 7.8	-	1 7.8	1 1.6	-	1 1.6	15 66.5
Unmodified and Heat-Fractured Stone	2 9.7	5 54.2	4 201.8	-	11 265.7	1 3.4	3 53.3	4 56.7	113 1456.3
TOTAL	2 9.7	5 54.2	6 210.7	-	13 274.6	1 3.4	4 54.9	5 58.3	135 1562.9



Table 17. Site 11-Ct-364, Phase II: Lithic Debitage Material Types by Weight (g)

Category	Test Unit 1				Test Unit 2			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Cobden	-	-	-	-	-	-	-	-
Mill Creek	-	-	-	-	-	-	-	-
Kinkaid	-	2.0	-	2.0	-	-	27.7	27.7
Burlington	-	2.1	-	2.1	-	-	-	-
Kaolin	-	-	-	-	-	-	-	-
Ign/Met.	67.1	242.3	95.1	404.5	309.4	141.7	215.8	666.9
Sandstone	-	12.7	-	12.7	-	-	-	-
Limestone	7.8	-	3.1	10.9	-	5.3	22.5	27.8
Unidentified	26.8	1.2	8.3	36.3	16.3	7.4	12.3	39.1
TOTAL	101.7	260.3	106.5	468.5	325.7	154.4	278.3	761.5

Table 17. (cont'd)

Category	Test Unit 3				Test Unit 4				Grand Total All Units
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	
Cobden	-	-	-	-	-	-	-	-	-
Mill Creek	-	-	-	-	-	-	-	-	-
Kinkaid	-	-	-	-	-	-	-	-	29.7
Burlington	-	-	-	-	-	-	-	-	2.1
Kaolin	-	-	-	-	-	-	-	-	-
Ign/Met.	9.7	50.8	198.6	259.1	3.4	53.3	-	56.7	1387.2
Sandstone	-	-	3.2	3.2	-	-	-	-	15.9
Limestone	-	3.4	-	3.4	-	-	-	-	42.1
Unidentified	-	-	8.9	8.9	-	1.6	-	1.6	85.9
TOTAL	9.7	54.2	210.7	274.6	3.4	54.9	-	58.3	1562.9

Table 18. Site 11-Ct-364, Phase 11: Lithic Debitage - Retouched/Utilized vs. Unmodified

Category	-----Test Unit 1-----				-----Test Unit 2-----			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Retouched/ Utilized	-	-	-	-	-	-	-	-
Unmodified	17	23	8	48	27	19	22	69
Total	17	23	8	48	27	19	22	69

Category	-----Test Unit 3-----				-----Test Unit 4-----				Grand Total All Units
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	
Retouched/ Utilized	-	-	-	-	-	-	-	-	-
Unmodified	2	5	6	13	1	4	-	5	135
Total	2	5	6	13	1	4	-	5	135

Table 19. Site 11-Ct-364, Phase II: Lithic Debitage\* - Thermally Altered vs. Unaltered

Category	Test Unit 1			Test Unit 2			Test Unit 3			Test Unit 4			Grand Total All Units
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	
Thermally Altered	4	1	-	5	4	-	1	5	4	-	1	5	14
Unaltered	0	2	2	4	-	3	1	4	-	3	-	3	8
Total	4	3	2	9	4	3	2	9	4	3	1	8	22

Category	Test Unit 1			Test Unit 2			Test Unit 3			Test Unit 4			Grand Total All Units
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	
Thermally Altered	-	-	2	2	-	1	-	1	-	-	-	-	4
Unaltered	-	-	-	-	-	-	-	-	-	-	-	-	0
Total	-	-	2	2	-	1	-	1	-	-	-	-	4

\*excluding unmodified and heat-fractured stone category

Table 20. Site 11-Ct-385, Phase 11: Lithic Debitage Frequency/Weight (g)

Debitage Category	-----Test Unit 1-----						-----Test Unit 2-----			
	Level 1	Level 2	Level 3	Fea. 1 Level 4	Fea. 1 Level 5	Fea. 1 Level 6	Total	Level 1	Level 2	Total
Cores (Shaped)	-	-	-	-	-	-	-	-	-	-
Cores (Irregular)	-	-	1 26.3	-	-	-	1 26.3	-	1 22.5	1 22.5
Primary Flakes	-	-	1 2.1	-	-	-	1 2.1	-	-	-
Secondary Flakes	2 12.7	-	-	-	-	-	2 12.7	1 0.9	-	1 0.9
Tertiary Flakes	5 5.3	7 18.3	1 2.1	-	-	-	13 25.7	4 2.1	-	4 2.1
Bifacial Thinning Flakes	-	-	-	-	-	-	-	1 0.3	-	1 0.3
Hoe Flakes	-	-	-	1 0.6	-	-	1 0.6	-	-	-
Shatter	4 15.4	-	-	-	-	-	4 15.4	3 7.3	1 2.2	4 9.5
Unmodified and Heat-Fractured Stone	86 671.1	72 1011.9	86 886.2	106 1473.4	83 1020.4	3 34.3	436 5097.3	188 2151.1	59 940.0	247 3091.1
TOTAL	97 704.5	79 1030.2	89 916.7	107 1474.0	83 1020.4	3 34.3	458 5180.1	197 2161.7	61 964.7	258 3126.4

Table 20. (cont'd)

Debitage Category	Test Unit 3 Level 1	Test Unit 4			Test Unit 5						
		Level 1	Fea. 2	Total	Level 1	Level 2	Level 3	Level 4	Fea. 3	Total	
Cores (Shaped)	-	-	-	-	-	-	-	-	-	-	
Cores (Irregular)	-	-	-	-	1 10.7	-	-	-	-	1 10.7	
Primary Flakes	2 5.7	-	-	-	-	-	-	-	-	-	
Secondary Flakes	2 3.3	2 8.0	-	2 8.0	1 0.7	-	-	-	-	1 0.7	
Tertiary Flakes	6 6.0	2 4.1	2 2.4	4 6.5	4 2.5	1 0.8	-	-	1 8.9	6 12.2	
Blades	1 11.2	-	-	-	-	-	-	-	-	-	
Bifacial Thinning Flakes	-	1 0.4	-	1 0.4	2 2.9	-	-	-	-	2 2.9	
Shatter	6 31.6	5 28.7	1 2.0	6 30.7	8 31.4	3 12.8	2 4.8	-	2 2.1	15 51.1	
Unmodified and Heat-Fractured Stone	172 2557.9	106 1486.2	31 754.2	137 2240.4	148 1386.5	68 811.0	21 291.7	3 8.7	21 308.1	261 2806.0	
TOTAL	189 2615.7	116 1527.4	34 758.6	150 2286.0	164 1434.7	72 824.6	23 296.5	3 8.7	24 319.1	286 2883.6	

Table 20. (cont'd)

Debitage Category	-----Test Unit 5 (extension)-----			Test Unit 6		Test Unit 7	
	Level 1	Level 2	Level 3	Total	Level 1	Level 1	Level 1
Cores (Shaped)	-	-	-	-	-	-	-
Cores (Irregular)	-	-	-	-	-	-	-
Primary Flakes	-	-	-	-	-	-	-
Secondary Flakes	-	-	-	-	1 1.4	-	-
Tertiary Flakes	-	-	-	-	-	1 1.3	-
Bifacial Thinning Flakes	-	-	-	-	-	2 2.1	-
Shatter	-	-	-	-	-	1 5.6	-
Unmodified and Heat-Fractured Stone	6 73.2	-	-	6 73.2	22 132.0	40 546.2	-
TOTAL	6 73.2	-	-	6 73.2	23 133.4	44 555.2	-

Table 20. (cont'd)

Debitage Category	Test Unit 8	Test Unit 9			Grand Total All Units
	Level 1	Level 1	Level 2	Level 3	
Cores (Shaped)	-	-	-	-	-
Cores (Irregular)	-	-	-	-	3 59.5
Primary Flakes	-	-	-	-	3 7.8
Secondary Flakes	-	-	-	-	9 27.0
Tertiary Flakes	-	3 2.4	-	-	3 2.4 37 56.2
Blades	-	-	-	-	1 11.2
Bifacial Thinning Flakes	1 0.9	1 0.3	-	-	1 0.3 8 6.9
Hoe flakes	-	-	-	-	1 0.6
Shatter	-	2 4.4	-	-	2 4.4 38 148.3
Unmodified and Heat-Fractured Stone	91 896.9	36 407.5	9 120.4	2 73.0	1459 18041.9
TOTAL	92 897.8	42 414.6	9 120.4	2 73.0	1559 18359.4



Table 21. Site 11-Ct-385, Phase II: Lithic Debitage Material Types by Weight (g)

Category	-----Test Unit 1-----						-----Test Unit 2-----			
	Level 1	Level 2	Level 3	Fea. 1			Total	Level 1	Level 2	Total
				Level 4	Level 5	Level 6				
Cobden	-	-	4.2	-	-	-	4.2	0.5	-	0.5
Mill Creek	20.6	6.5	-	-	-	-	27.1	0.7	-	0.7
Kinkaid	7.7	1.6	-	-	-	-	9.3	0.9	-	0.9
Burlington	14.0	-	26.3	-	-	-	40.3	0.3	22.5	22.8
Kaolin	0.8	3.9	-	-	-	-	4.7	-	-	-
Ign/Met.	304.8	820.9	681.2	1101.1	294.6	34.3	3236.9	1885.9	876.5	2762.4
Sandstone	139.7	126.0	37.0	68.7	14.7	-	386.1	41.5	36.4	77.9
Limestone	214.6	65.0	168.0	303.6	711.1	-	1462.3	223.7	27.1	250.8
Unidentified	2.3	6.3	-	0.6	-	-	9.2	8.2	2.2	10.4
TOTAL	704.5	1030.2	916.7	1474.0	1020.4	34.3	5180.1	2161.7	964.7	3126.4

Table 21. (cont'd)

Category	Test Unit 3		Test Unit 4		Total	Test Unit 5					Total
	Level 1	Level 3	Level 1	Fea. 2		Level 1	Level 2	Level 3	Level 4	Fea. 3	
Cobden	12.3		5.7	-	5.7	0.8	-	-	-	-	0.8
Mill Creek	5.7		0.8	2.0	2.8	-	10.0	-	-	-	10.0
Kinkaid	0		15.4	-	15.4	-	-	-	-	-	-
Burlington	7.3		3.3	-	3.3	13.7	3.6	4.8	-	11.0	33.1
Kaolin	-		5.1	-	5.1	1.5	-	-	-	-	1.5
Ign./Met.	2476.5		1473.2	690.6	2163.8	1386.5	803.9	291.7	8.7	298.7	2789.5
Sandstone	-		13.0	-	13.0	-	2.3	-	-	0.7	3.0
Limestone	81.4		-	7.7	7.7	-	4.8	-	-	8.7	13.5
Unidentified	32.5		10.9	58.3	69.2	32.2	-	-	-	-	32.2
TOTAL	2615.7		1527.4	758.6	2286.0	1434.7	824.6	296.5	8.7	319.1	2883.6

Table 21. (cont'd)

Category	--Test Unit 5 (extension)--			Test Ut.6		Test Ut.7		Test Ut.8		-----Test Unit 9-----			Grand Tl.	
	Lev.1	Lev.2	Lev.3	Total	Level 1	Level 1	Level 1	Level 1	Level 1	Lev.1	Lev.2	Lev.3	Total	All Uts.
Cobden	-	-	-	-	-	-	-	-	-	-	-	-	-	23.5
Mill Creek	-	-	-	-	-	-	-	-	1.1	-	-	-	1.1	47.4
Kinkaid	-	-	-	-	-	-	-	-	-	-	-	-	-	25.6
Burlington	-	-	-	-	-	1.3	-	-	-	-	-	-	-	108.1
Kaolin	-	-	-	-	-	-	-	-	0.3	-	-	-	0.3	11.6
Ign/Met.	73.2	-	-	73.2	98.8	508.0	824.3	383.2	120.4	73.0	576.6	15510.0		
Sandstone	-	-	-	-	13.4	-	-	-	-	-	-	-	-	493.4
Limestone	-	-	-	-	19.8	38.2	34.2	24.3	-	-	24.3	1932.2		
Shale	-	-	-	-	-	-	38.4	-	-	-	-	-	-	38.4
Unidentified	-	-	-	-	1.4	7.7	0.9	5.7	-	-	-	5.7	169.2	
TOTAL	73.2	-	-	73.2	133.4	555.2	897.8	414.6	120.4	73.0	608.0	18359.4		

Table 22. Site 11-Ct-385, Phase II: Lithic Debitage - Retouched/Utilized vs. Unmodified

Category	-----Test Unit 1-----										-----Test Unit 2-----			
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 1	Level 2	Level 3	Total
Retouched/ Utilized	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unmodified	97	79	89	107	83	3	458	197	61	258				
Total	97	79	89	107	83	3	458	197	61	258				

Category	Test Unit 3		-----Test Unit 4-----		-----Test Unit 5-----					Total
	Level 1	Level 2	Level 1	Level 2	Level 1	Level 2	Level 3	Level 4		
Retouched/ Utilized	1	2	2	2	2	-	-	-	2	
Unmodified	188	114	34	148	162	72	23	3	284	
Total	189	116	34	150	164	72	23	3	286	

Category	Test Unit 6	Test Unit 7	Test Unit 8	-----Test Unit 9-----			Grand Total
	Level 1	Level 1	Level 1	Level 1	Level 2	Level 3	
Retouched/ Utilized	-	1	1	-	-	-	7
Unmodified	23	43	91	42	9	2	1546
Total	23	44	92	42	9	2	1553

Table 23. Site 11-Ct-385, Phase 11: Lithic Debitage\* - Thermally Altered vs. Unaltered

Category	-----Test Unit 1-----						-----Test Unit 2-----			
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Total	Level 1	Level 2	Total
Thermally Altered	2	2	1	-	-	-	5	2	1	3
Unaltered	9	5	2	1	-	-	17	7	1	8
Total	11	7	3	1	-	-	22	9	2	11

Category	-----Test Unit 3-----				-----Test Unit 4-----				-----Test Unit 5-----			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Thermally Altered	5	5	-	5	7	1	2	-	-	-	-	10
Unaltered	12	5	3	8	9	3	-	-	-	3	3	15
Total	17	10	3	13	16	4	2	-	-	3	3	25

Category	Test Unit 6	Test Unit 7	Test Unit 8	-----Test Unit 9-----			Grand Total All Units
	Level 1	Level 1	Level 1	Level 1	Level 2	Level 3	
Thermally Altered	-	-	-	2	-	-	30
Unaltered	1	4	1	4	-	4	70
Total	1	4	1	6	-	6	100

\*excluding unmodified and heat-fractured stone category

Table 24. Site 11-Ct-385, Phase II: Chipped Stone Artifacts - Unifaces

Provenience	Type/ Description	Chert Type	Max. Length (mm)	Max. Width (mm)	Max. Thickness (mm)	Weight (g)	Suggested Function
Surface	Distal fragment	Unident.	-	48.3	14.4	36.8	Scraper

Table 25. Site 11-Ct-385, Phase II: Groundstone

Provenience	Material	Weight (g)	Function
General Surface	Igneous/Metamorphic	335.7	Nutting Stone
	Igneous/Metamorphic	476.2	Nutting Stone
	Sandstone	581.0	Nutting Stone
Test Unit 2 (Level 2)	Igneous/Metamorphic	702.0	Nutting Stone
Test Unit 4 (Feature 2)	Igneous/Metamorphic	1218.0	Nutting Stone

Table 26. Site 11-Ct-385, Phase 11: Sherd Frequencies, Late Woodland and Ceramics

Category	-----Test Unit 1-----						-----Test Unit 2-----			
	Level 1	Level 2	Level 3	Level 4	Level 5	Fea. 1	Total	Level 1	Level 2	Total
Smoothed Plainware	2	8	14	2	1	-	27	21	1	22
Cordmarked	15	40	2 <sup>R</sup> 52	60	1 <sup>R</sup> 20	7	197	1 <sup>R</sup> 32	7	40
Smoothed-over Cordmarked	-	-	-	-	-	-	-	-	2	2
Weathered	11	30	16	14	6	-	77	18	-	18
Total	28	78	84	76	28	7	301	72	10	82

Category	-----Test Unit 4-----			-----Test Unit 5-----			
	Level 1	Fea. 2	Total	Level 1	Level 2	Level 3	Fea. 3
Smoothed Plainware	3	3	6	7	1	-	3
Cordmarked	19	2 <sup>R</sup> 41	62	12	1 <sup>R</sup> 10	2	8
Smoothed-over Cordmarked	-	-	-	-	1	-	-
Weathered	6	10	16	16	6	-	3
Total	28	56	84	35	19	2	14

R = Rlm sherd



Table 26. (cont'd)

Category	General Surface	Test Unit 3 Level 1	Test Unit 6 Level 1	Test Unit 7 Level 1	Test Unit 9 Level 1	Grand Total All Units
Smoothed Platware	1	-	-	-	-	67
Cordmarked	8	9	1	4	-	354
Smoothed-over Cordmarked	1	-	-	-	-	4
Weathered	2	6	-	1	5	150
Total	12	15	1	5	5	575

## CHAPTER VII: INTERPRETATION AND CONCLUSIONS

### Interpretation of Data

#### 11-Ct-34 (Orrell)

Recovered materials indicate Late Woodland and Mississippian occupations; very limited ceramic evidence suggests Middle Woodland and Oneota use of the site. Previous investigations at Orrell have indicated the presence of these and earlier components (Chapter III).

Stone tool manufacture/maintenance does not appear to have been a major activity at this site. The single projectile point recovered at Orrell is not indicative of a major reliance on hunting or the processing of materials. One hoe flake was retrieved, suggesting the practice of horticulture. Lithics previously recovered by Salzer led him to propose that the subsistence base of this community was centered on horticulture rather than hunting (1963:39).

Late Woodland ceramics recovered at Orrell during this project have not been assigned to a particular phase. Salzer, however, has identified much of the previously recovered Late Woodland ceramics as Raymond cordmarked (1963:Table IV). Mississippian ceramics recently recovered at Orrell may represent an early Mississippian component.

Intact cultural features were not found during the current project. Salzer noted refuse pits containing mussel shell and rock fragments as well as Late Woodland and Mississippian ceramics (1963:24-26). Hassen et al. (1984b:76) have reported wall trenches and possible storage pits eroding along the shoreline at Orrell. The exposed mussel shell concentration reported here was undoubtedly derived from wave-eroded pit features.

Numerous mussel shell fragments were recovered during the present investigation and during previous work (Hassen et al. 1984b; Salzer 1963), indicating the importance of mussels in the subsistence base. The mussel varieties recently recovered are found in small to moderate sized streams of central Illinois (Appendix C). Modification of mussel shell for utilitarian or decorative purposes is suggested by one specimen with a small hole drilled through it.

One tentatively identified Busycon carica (knobbed whelk) may indicate involvement of the former inhabitants of Orrell in some form of trade network. The knobbed whelk is found on the Gulf of Mexico and Atlantic coasts (Appendix C). Rackerby (1966:84, 114) has reported

Busycon from the Boulder site, but not in association with particular cultural materials or features.

Faunal material other than mussel shell was found in extremely small quantity. This contrasts with Salzer's (1963:37) previous work at Orrell, during which sizable amounts of animal bone were recovered. This previously reported faunal material suggests that hunting was more important to the subsistence base than lithic evidence has indicated.

Recently recovered data from the Orrell site should be viewed with caution. Previous excavation and extensive wave erosion have severely skewed the information content of this site. The horizontal extent of the current testing was very limited and, therefore, a source of bias. When looking at the present data, it is necessary to consider the results from previous investigations.

#### 11-Ct-309

Prehistoric cultural material recovered during Phase I investigation suggests an initial Middle Archaic component at this site. The small amount of nondiagnostic lithic material recovered here indicates a temporary camp/limited activity site. However, a description by Denny (1979:13) suggests the site once covered a larger area but has since been eroded by wave action.

#### 11-Ct-364

Material recovered during Phase I and Phase II investigation indicates the presence of Middle Archaic and Late Woodland components.

Historic cultural material recovered during Phase II testing probably represents activity from nearby historic site 11-Ct-375. One diagnostic historic artifact dates from the middle to late nineteenth century.

Very little cultural material was recovered during testing, most occurring in test units nearest the shoreline. The area outside the known site boundary was particularly devoid of cultural material. Most of this site appears to have been eroded and destroyed by wave action.

#### 11-Ct-385

Most of the material present at this site is of Late Woodland affiliation. A moderate amount of stone tool manufacture/maintenance and hunting is suggested by the chipped stone tool inventory. The recovery of one hoe flake indicates the possible practice of horticulture.

Ceramics recovered from this site are similar to Raymond cordmarked or Early Bluff (Maxwell 1951; Munson 1971) and associated in feature 2 with a radiocarbon age of  $1090 \pm 60$  years: A.D. 860 (Beta 14445).

Three pit features were excavated; all contained large quantities of lithic material and Late Woodland sherds. Two pits contained moderate amounts of floral and faunal material. A nutting stone was recovered from the fill of one of these pits.

Identification of wood charcoal from these pits showed that floodplain, slope, and upland forest resources were being utilized for firewood (Appendix B). Charred nut residue indicates aboriginal use of black walnut, hickory, acorn, and pecan. The variety of nuts collected suggests use of the immediate and nearby resource zones. The collection and processing of nuts is proposed as one of the major activities carried out by the former inhabitants of this site (Appendix B).

Nearly all of the identified faunal materials were recovered from one pit. Fresh water mussels and crayfish were represented as well as fish, reptiles, amphibians, birds, and mammals. These faunal materials are not unusual for features from archaeological sites of central and southern Illinois (Appendix C).

Comparison of the floral and faunal materials recovered at this site with those of the Kingfish site (21C1-208) (Lopinot et al. 1982) reveals general similarities. Lopinot et al. (1982:60) suggest that the Late Woodland inhabitants of the Kingfish site "operated with a very generalized and localized hunting-fishing-gathering-horticultural strategy." The data recovered from 11-Ct-385 seems to indicate a similar subsistence strategy in operation.

Structural features were not discovered during testing at the site. It is not known whether this was a temporary camp, utilized seasonally, or a permanent habitation site. Recovered floral and faunal materials suggest the site could have been in use during most of the year.

#### 11-Ct-386

A small quantity of nondiagnostic prehistoric lithic material was revealed by Phase I investigation. Phase II preparation of the ridge spur profile indicated recent brush burning and land fill activity had taken place. Cultural materials were absent from this profile and from the buried soil horizon as exposed in this area.

#### Evaluation of Significance

The primary task during Phase II of this project was assessment of eligibility for listing of sites on the National Register of Historic Places. The NRHP criteria are:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past; or
- (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that have yielded, or may be likely to yield, information important in prehistory or history (Federal Register 1976:1595).

Statements of significance follow using the above criteria.

11-Ct-34 (Orrell)

The site has been deflated by wave action, with mussel shell and prehistoric materials eroding from pit features and being redeposited by wave action along the southeastern edge of the site. Most of the materials recovered during Phase II testing were from the ground surface or reworked soil levels. Evidence for intact cultural features was lacking.

This site has not retained its contextual integrity. It has previously been extensively excavated (Salzer 1963) and is also subjected to occasional unauthorized collection. The site is not likely to provide further information of importance to either prehistory or history, is not potentially significant, and is not eligible for nomination to the NRHP.

This site will continue to undergo direct and adverse impacts in the form of wave erosion and deflation. Exposed cultural materials will be subjected to unauthorized collection.

11-Ct-309

At least a portion of this site has been destroyed by wave action. Phase II testing recovered a very limited amount of nondiagnostic lithic material below ground surface. Definable cultural features were absent.

This site is unlikely to provide information of importance to either prehistory or history. The site is not potentially significant and is not eligible for nomination to the NRHP.

This site will continue to undergo direct and adverse impact in the form of wave erosion. This site will probably be totally destroyed within the foreseeable future.

11-Ct-364

The site is much deflated by wave action. Moderate amounts of prehistoric materials are present at the ground surface. Subsurface prehistoric and historic material was recovered during Phase II testing in limited amounts, predominantly in upper levels. Definable cultural features were absent.

Most of this site has lost its contextual integrity. An unknown portion has already been destroyed by wave action. It does not appear that it will provide further information of importance to either prehistory or history. This site is not potentially significant and is not eligible for nomination to the NRHP.

This site will continue to undergo direct and adverse impact in the form of wave erosion and deflation. Exposed cultural materials will be subjected to unauthorized collection.

11-Ct-385

This site is currently undergoing wave erosion along its northwestern edge. It is uncertain how much has been destroyed by this process. Prehistoric materials are present along the beach below the eroded bank.

Phase II testing provided relatively large amounts of Late Woodland materials and moderate amounts of well-preserved floral and faunal materials from pit features. At least one feature provided enough charcoal for radiocarbon dating.

The extant portion of the site has retained its contextual integrity; the potential exists for additional cultural features and discrete activity areas on the site.

This site has potential importance to the prehistory of the immediate area as well as the broader Middle Kaskaskia drainage. The preservation of floral and faunal remains within pit features at this site will provide information on subsistence strategies and resource utilization by Late Woodland groups. Understanding the differential use of this site as opposed to Late Woodland sites located within other topographic settings would contribute to our understanding of Late Woodland settlement subsistence patterns (cf. Kuttruff 1974:206; Roper 1979:141).

This site is potentially eligible for nomination to the NRHP. It will continue to undergo direct and adverse impact from wave erosion, while exposed materials along the shoreline will be subjected to unauthorized collection. Detailed documentation for a determination of eligibility for inclusion in the National Register is in Appendix F.

11-Ct-386

A limited amount of prehistoric lithic debitage was noted on the beach at this site during Phase I investigations. The ridge spur adjacent to this beach has recently been a locus for the burning of brush, followed by the dumping of fill materials over the original ground surface. Phase II investigation of this site has not provided information on the origin of the above-mentioned prehistoric cultural material. This material could have been derived from a number of sources, including recent fill.

The contextual integrity of this site is in doubt. It does not appear that it will provide information of importance to either prehistory or history, is not potentially significant, and is not eligible for nomination to the NRHP.

This site will continue to undergo direct and adverse impact from wave erosion. Additional cultural materials may be exposed in the future.

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APPENDIX A

Locational Maps (Figures 1 - 10) and Site Forms

On File with the St. Louis Corps of Engineers

APPENDIX B  
Floral Analysis  
by  
William M. Cremin

DEPARTMENT OF ANTHROPOLOGY  
WESTERN MICHIGAN UNIVERSITY

REPORT OF INVESTIGATIONS NO. 70  
1985

CARBONIZED PLANT RESIDUES FROM 11CT385,  
A LATE WOODLAND SITE NEAR THE CARLYLE RESERVOIR  
IN CLINTON COUNTY, ILLINOIS

WILLIAM M. CREMIN

Site 11CT385 is a Late Woodland site of undetermined extent located in the southeast corner of Section 25, Irishtown Township, T3N R2W, Clinton County, Illinois. Today, this site occupies an actively eroding bank of the Carlyle Reservoir, but formerly it was situated on a ridge spur flanking the eastern margin of the Kaskaskia River Valley at an elevation of about 6 m above the river floodplain.

The former floodplain below the site averaged 4.8 km in width in this segment of the valley. Known locally as the Boulder Bottoms, it was dotted with small ox-bow lakes and supported a dense growth of pin oaks in poorly drained swampy areas, with willow and sycamore along the river banks and minor stands of Palustrine oak-hickory-maple forest occupying better drained landforms. The terrace supported climax vegetation ranging from hydrophytic forms in less well drained areas to mesophytic communities along the rim of the terrace. Slopes and uplands were dominated by upland oak-hickory forest, and the prairie approached to within a short distance of the site. The advantages of such location for a settlement of Late Woodland people would have been the availability of a wide range of critical life support resources in the diverse zones comprising the immediate site environs.

This site was investigated by American Resources Group, Ltd., of Carbondale, Illinois, during the summer of 1985. Excavation consisted of nine 1 x 1 m and 1 x 2 m test squares, with special attention being given to lake's edge where several prehistoric cultural features were observed to be eroding out of the bank. How much of the site has disappeared beneath the waters of Carlyle Reservoir cannot be precisely ascertained, but limited testing has yielded enough evidence of significant Late Woodland occupation to warrant National Register

nomination for this prehistoric community (Michael Sirico, American Resources Group, Ltd., personal communication).

During excavation, some carbonized plant residues were recovered while screening unit levels and collected by hand from two of the features. In addition, six 5 liter flotation samples from three features produced plant remains. In total, 22 samples of carbonized plant residues from 10 proveniences were submitted to this analyst for identification and quantification. These data are summarized in Table 1.

Carbonized plant remains aggregate 80.19 g by weight and have been placed into the following categories during analysis: unidentified charcoal (consisting of unsorted wood and nutshell fragments that passed through the 3.55 mm laboratory sieve and were not further examined) - 13.69 g; wood charcoal - 20.12 g; nut charcoal - 2.28 g; nutshell and kernel fragments - 42.56 g; and seed residues - 1.54 g.

Nothing can be said with respect to the category of unidentified charcoal, but it is perhaps noteworthy that the small quantity of wood charcoal includes at least six species that were formerly common to native bottomland, slope, and upland forest communities. Present in the sample (together with their frequencies of occurrence) are: white oak group - 5; American elm - 3; American chestnut - 2; white ash - 1; sycamore - 1; and black walnut - 1. The diversity exhibited by this small sample does not argue well for species selectivity on the part of those gathering fuelwood, but would rather appear to indicate that deadwood was being collected by the site's residents as it became available to them in the immediate vicinity of 11CT385.



Table 1: Late Woodland Plant Remains from Site 11CT385 near Carlyle Reservoir, Carlyle, Illinois.

<u>Lot no.</u>	<u>ARG no.</u>	<u>Provenience</u>	<u>Sample Volume</u>	<u>Contents wt(g)/ ct</u>	<u>Comments</u>
1	-	Unit 9, L-1	-	.28 / 1	wood charcoal, diffuse porous, probably <u>Platanus occidentalis</u> (sycamore)
2	-	Unit 5, top of Feature 3	-	.90 / 81	5 pieces are <u>Quercus</u> spp. (white oak group) and remaining wood charcoal not identifiable
3	-	Unit 5, near base of F-3	-	.01 / 1	<u>Carya</u> sp. nutshell
4	AS-1	Unit 1, F-1, 40-50 cm	5 l	.19 / 13 2.56 / - .80 / 19	<u>Ulmus americana</u> charcoal (American elm) <u>Carya</u> sp. nutshell unid. charcoal
5	AS-2	Unit 1, F-1, 50-60 cm	5 l	1.37 / 22 3.55 / -	3 specimens of ring porous, 2 <u>Quercus</u> spp. and 1 <u>U. americana</u> wood charcoal <u>Carya</u> sp. (probably <u>C. ovata</u> , shagbark hickory) unid. charcoal

Table 1, cont.

<u>Lot no.</u>	<u>ARG no.</u>	<u>Provenience</u>	<u>Sample Volume</u>	<u>Contents wt(g)/ ct</u>	<u>Comments</u>
				11.31 / 192	16 pieces of ring porous, 9 of <u>Fraxinus americana</u> (white ash), 7 <u>Quercus</u> spp. (white oak group) and 4 pieces that are probably <u>Castanea dentata</u> (American chestnut) wood charcoal
			3.19 / 67		<u>Carya</u> spp. nutshell
			.61 / 3		<u>C. ovata</u> nutshell
			.25 / 3		1 <u>Prunus</u> sp. and 2 unidentified seed or stone fragments
6	AS-3	Unit 1, F-1, 60-70 cm	5 l	2.41 / -	unid. charcoal
			2.17 / 73		1 specimen is <u>U. americana</u> and a second <u>Quercus</u> sp. wood charcoal
			1.00 / 16		<u>Carya</u> spp. nutshell
			.42 / 5		<u>C. ovata</u> nutshell
			.48 / 2		<u>C. laciniosa</u> (shell-bark hickory) nutshell
			.02 / 1		probably bitternut hickory( <u>C. cordiformis</u> ) shell fragment

Table 1, cont.

<u>Lot no.</u>	<u>ARG no.</u>	<u>Provenience</u>	<u>Sample Volume</u>	<u>Contents wt(g)/ ct</u>	<u>Comments</u>
7	AS-4-1	Unit 4, F-2, at depth of 27 cm in N 1/2	5 1	.46 / 19	2 specimens of <u>Juglans nigra</u> (black walnut) wood charcoal
				4.39 / 154	<u>Carya</u> spp. nutshell
				1.03 / 7	<u>C. glabra</u> (pignut hickory) nutshell
				.51 / 3	<u>C. illinoensis</u> (pecan) nutshell
				.32 / 2	<u>C. ovata</u> nutshell
				.71 / 1	<u>J. nigra</u> kernel and shell (largely intact)
				.18 / 1+	1 complete and several fragments of <u>Diospyros virginiana</u> (persimmon) seed
8	AS-4-3	Unit 4, F-2, at depth of 27 cm in S 1/2	5 1	4.01 / 63	2 fragments of <u>Quercus</u> spp. (white oak group) and 1 specimen of <u>C. dentata</u> wood charcoal and 6 fragments of <u>Quercus</u> spp. bark
				15.24 / 778	<u>Carya</u> spp. nutshell
				.52 / 16	<u>Quercus</u> spp. kernel and shell fragments

Table 1, cont.

<u>Lot no.</u>	<u>ARG no.</u>	<u>Provenience</u>	<u>Sample Volume</u>	<u>Contents wt(g)/ct</u>	<u>Comments</u>
9	AS-5-12	Unit 5, F-3, 40-50 cm	5 1	2.73 / 15  .76 / 8+	<u>C. tomentosa</u> (mockernut hickory) nutshell  4 pieces of <u>Prunus serotina</u> (wild black cherry) stone, 1 seed of <u>Polygonum erectum</u> (knotweed), 1 seed of <u>Scirpus</u> sp. (bulrush), 16 minute fragments of <u>D. virginiana</u> and 1 unidentified large, triangular seed-like structure
				.17 / -	unid. charcoal
				.27 / 14	<u>Carya</u> spp. nutshell  (6 fresh specimens of <u>Chenopodium album</u> or lamb's quarter and 2 fungal nodules)
10	-	Unit 4, F-2, 41-45 cm	-	2.28 / -	unidentified nut charcoal (mostly meat or kernel fragments)
				4.12 / 14	one whole nut and 13 pieces of <u>C. laciniosa</u> nutshell
				3.97 / 24	acorn kernel and shell fragments (probably

Table 1, cont.

<u>Lot no.</u>	<u>ARG no.</u>	<u>Provenience</u>	<u>Sample Volume</u>	<u>Contents wt(g)/ct</u>	<u>Comments</u>
					<u>Q. palustris</u> or pin oak)
				1.60 / 13	the meats of pecan or <u>C. illinoensis</u>
				.35 / 1	5 fragments that represent no more than a single seed of <u>D. virginiana</u>

Nut residues, in aggregate, exceed the total weight of wood charcoal in the sample by a ratio of more than 2:1. However, the potential significance of this observation may be biased due to the abundance of nuts comprising several concentrations in a single food processing facility (?), feature 2, where 28.89 g of hickory, black walnut, and acorn residues, representing 64.4% of all nut remains by weight, occur.

Hickory nut residues have been observed to occur in 9 of 10 lots or proveniences and are everywhere the most abundant remains, comprising 37.36 g (87.8%) of the total identified nut weight. The shell fragments and kernels of acorn occur twice in feature 2 and total 4.49 g (10.5%) of the aggregate nut residues by weight. Black walnut is represented by a trace quantity (.71 g, 1.7%) in a single lot from this same pit.

As was the case with wood charcoal, nutshell and kernel residues, representing a minimum of six species of hickory nut, including pecan, shagbark hickory, mockernut hickory, bitternut hickory, pignut hickory, and shellbark hickory; black walnut; and at least one species of acorn, pin oak, argue strongly for the harvesting of the autumn nut crop and acorn mast across the entire spectrum of plant resource zones occurring within the immediate site environs.

Finally, a mere 1.54 g of seed remains occur in the sample, with the fleshy fruits of the persimmon and American plum and/or wild black cherry being represented by three and two occurrences, respectively, and a single occurrence each being observed for the erect knotweed and the bulrush. The bulrush would have been a common constituent of marsh and/or swamp associations occupying the wet bottoms below the site, and the erect knotweed might be anticipated to have grown in some profusion

wherever disturbed habitats existed, including on the site itself. Both the persimmon and species of the genus Prunus would have occurred through the immediate vicinity of 11CT385.

While the plant residues under study constitute a very small sample, making interpretation of plant resource utilization by the residents of the Late Woodland site difficult at best, these data do provide the basis for making some preliminary statements about prehistoric subsistence activities undertaken from this location in the Kaskaskia River Valley. First, the sheer diversity and ubiquity, if not the abundance, of nutshell (and kernel or meat fragments) in the sample strongly suggest that the local nut crop played an important role in resource scheduling decisions during the occupation of 11CT385. The oil and fat-rich hickory nut and black walnut would have been of considerable food value, both when in season and perhaps for storage and consumption later in the year. Secondly, the two concentrations of acorn residues together with the remains of oily nuts in feature 2 certainly indicate that this source of carbohydrates was being collected and processed for human consumption as well. Just how valuable one resource was in relation to the other is, however, difficult to ascertain from a small sample, especially in light of the often-cited problems associated with the differential preservation of nut and acorn residues. Finally, the presence of several fleshy fruits and the starchy seed of erect knotweed might be anticipated in an assemblage suggesting exploitation of the autumn nut crop, but their small numbers certainly argue for no more than incidental collection along with the harvesting of nut resources. And in the case of the single seed of the

erect knotweed, accidental inclusion in the sample as a result of natural seed rain on the site cannot be easily dismissed.

The data assembled and herein reviewed, when taken together, would appear to indicate that 11CT385 functioned primarily as a nut collecting and/or processing station during Late Woodland times and was occupied during the late summer-early fall of the year. However, the possibility that these surviving plant residues represent stored food that was processed and consumed later in the year cannot be ruled out. As the other site data are analyzed and compared with the results of this study, it may prove necessary to extend the occupation of this site over a greater portion of the year and perhaps also expand upon the role of this site in the Late Woodland subsistence-settlement system.



**APPENDIX C**  
**Faunal Analysis**  
by  
**Carl R. Falk**

Walden Creek Road  
Route 11 - Box 334-A  
Sevierville, Tennessee 37862

Mr. Michael J. McNerney  
American Resources Group, Ltd.  
127 North Washington  
Carbondale, Illinois 62901

31 October 1985

Dear Mike:

Enclosed you will find tables (4) detailing faunal remains from the Carlyle Lake area submitted for identification by Michael Sirico earlier this month (Ref: ARG letters dated 11 October 1985 and 18 October 1985). The specimens have been returned under separate cover.

Identification of the mussel and gastropod materials was carried out by Dr. Walter E. Klippel with my assistance. This work was completed utilizing modern comparative specimens from Illinois, Missouri and Tennessee. I identified the crustacean and vertebrate remains utilizing comparative specimens from the central and eastern U.S.

#### 11CT34 (Orrell)

The Orrell site tests yielded a rather diverse collection of freshwater mussels (18 genera). A total of 2,773g of shell were examined. Identified taxa are those which might be expected in a small to mid-sized stream in central Illinois. One fat mucket shell from the surface of the site exhibits a moderately large hole fashioned through the central portion of the valve; the hole is 7.8 to 8.2 mm in diameter.

One marine gastropod shell fragment is included in the Test 1 sample. This specimen is identified as knobbed whelk (Busycon carica), though we would stress that this identification is considered tentative. The knobbed whelk is found along the Atlantic coast and in the Gulf of Mexico. This form appears to be more common in the Gulf.

The vertebrate sample from 11CT34 weighs just 13.0 g and includes three identifiable elements: two turtle shell fragments and one white-tailed deer tooth (Rm3). The turtle bone includes a hyopoplastron from an ornate box turtle and a carapace fragment from an unidentified turtle - possibly a representative of the genus Chrysemys.

#### 11CT385

The naiad sample from 11CT385 is somewhat smaller (132.5g) and more limited than the one recovered from 11CT34. Three species are recorded. A relatively large proportion of the sample consists of unidentified pseudocardinal teeth nearly all of which are poorly preserved. Snail remains are limited to materials from a Feature 1 flotation sample; these remains are well preserved and of a probable recent origin.

31 October 1985

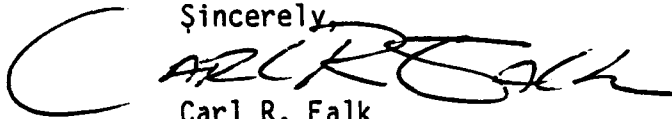
Three fragments of crayfish exoskeleton were recovered in the heavy fraction from Feature 1 (level 1). All three are calcined.

A total of 34.9g of bone from site 11CT385 was examined. The majority of the bone (27.0g) is from flotation samples and consists of fragmented debris representing each of the five vertebrate classes. A total of 172 elements were recorded; 23 of these specimens were not identified beyond Class. With the exception of a deer cuboid from Test 1 (level 3) and two elements from Feature 4, all identified specimens are from Feature 1. A number of the identified fish, reptile, bird and mammal elements were burned; none of the amphibian bone was burned.

In general terms, the 11CT38<sup>5</sup> vertebrate sample is unremarkable. The bone is well preserved and the range of taxa is consistent with materials from feature samples I have examined from archeological contexts in central and southern Illinois.

If we can provide additional information concerning these samples, please do not hesitate to contact me directly. We would appreciate receiving copies of the report upon its completion.

Sincerely,



Carl R. Falk

Table 1 . Identified freshwater mussel, terrestrial gastropod and crustacean specimens, Feature 1, site 11CT385.

Taxon	Lv 1	Lv 2	Lv 3	Total
Freshwater Mussels				
<u>Amblema plicata</u> (Say, 1817) three-ridge		2L -		2L
<u>Fusconaia flava</u> (Barnes, 1823) pig-toe	2L 1R		2L 4R	4L 5R
<u>Obliquaria reflexa</u> (Raf., 1820) three-horned warty-back	1L -		- 1R	1L 1R
unidentified pseudocardinal teeth	8L 6R	2L 1R	3L 4R	13L 11R
Subtotal (Freshwater Mussels)	18	5	14	37
-----				
Gastropods				
<u>Hawaiiia minuscula</u> tiny milk-glass snail		5		5
-----				
Crustaceans				
Decapoda (crayfish)	3			3
Total Specimens	21	10	14	45

Note: Lv 1 (40-50 cm b.s.), Lv 2 (50-60 cm b.s.), Lv 3 (60-70 cm b.s.);  
L = left valve, R = right valve.

Table 2 . Identified vertebrate specimens, Test 1, site 11CT34.

Taxon	Number of Specimens
Emydidae (box and water turtles)	1
<u>Terrapene ornata</u> (ornate box turtle)	1
<u>Odocoileus virginianus</u> (white-tailed deer)	1
Total Specimens	3

Table 3 . Identified freshwater mussel and marine gastropod specimens,  
site 11CT34.

Taxon	Surface	Test 1	Test 2	Total
Freshwater Mussels				
<u>Actinonaias ligamentina</u> (Lamarck, 1819) mucket		26L 31R		26L 31R
cf. <u>Actinonaias ligamentina</u>		38L 5R	3R	38L 8R
<u>Alasmidonta marginata</u> (Say, 1818) (elk-toe)		- 1R		- 1R
<u>Amblema plicata</u> (Say, 1817) three-ridge		11L 13R		11L 13R
cf. <u>Amblema plicata</u>		1L -		1L -
<u>Cyclonaias tuberculata</u> (Raf., 1820) purple warty-back		- 1R		- 1R
<u>Elliptio dilatata</u> (Raf., 1820) spike		14L 10R		14L 10R
cf. <u>Elliptio</u> sp.		- 3R		- 3R
<u>Epioblasma triquetra</u> (Raf., 1820) snuffbox		1L -		1L -
<u>Fusconaia flava</u> (Barnes, 1823) pig-toe		34L 33R		34L 33R
<u>Lampsilis ovata</u> (Say, 1817) pocketbook		3L -		3L -
<u>Lampsilis radiata</u> (Barnes, 1823) fat mucket	- 1R	- 1R		- 2R
<u>Lampsilis</u> sp.		2L 1R		2L 1R
<u>Lasmigona complanata</u> (Barnes, 1823) white heel-splitter		- 1R		- 1R
<u>Lasmigona costata</u> (Raf., 1820) fluted shell		1L -		1L -
cf. <u>Ligumia recta</u> (Lamarck, 1819) black sand shell		6L 5R		6L 5R

Note: L = left valve, R = right valve.

Table 3 . Identified freshwater mussel and marine gastropod specimens,  
site 11CT34 - concluded.

Taxon	Surface	Test 1	Test 2	Total
<u>Pleurobema cordatum</u> (Raf., 1820)		1L		1L
Ohio River pig-toe		-		-
<u>Potamilus alatus</u> (Say, 1817)		2L		2L
pink hell-splitter		-		-
<u>Ptychobranhus fasciolaris</u>		4L		4L
(Raf., 1820) kidney shell		6R		6R
<u>Quadrula metanevra</u> (Raf., 1820)		3L		3L
monkey-face		1R		1R
<u>Quadrula pustulosa</u> (Lea., 1831)		9L		9L
pimple-back		6R		6R
<u>Quadrula quadrula</u> (Raf., 1820)		2L		2L
maple-leaf		4R		4R
<u>Quadrula</u> sp.		1L		1L
		-		-
<u>Strophitus undulatus</u> (Say, 1817)		-		-
squaw-foot		1R		1R
<u>Tritogonia verrucosa</u> (Raf.,		5L		5L
1820) buckhorn		3R		3R
<u>Truncilla truncata</u> (Raf., 1820)		2L		2L
deer-toe		1R		1R
<u>Villosa iris</u> (Lea, 1830)		2L		2L
rainbow shell		3R		3R
unidentified pseudocardinal		20L		20L
teeth		19R		19R
-----				
Gastropods				
cf. <u>Busycon carica</u>				
knobbed whelk		1		1
Total Specimens	1	338	3	342

Note: L = left valve, R = right valve.

Table 4 . Identified vertebrate specimens, site 11CT385.

Taxon	Test 1	Feature 1			Feature 4*	Total
	Lv 3	Lv 1	Lv 2	Lv 3		
Fish						
Cyprinidae (minnows)			1			1
<u>Ictalurus</u> sp. (catfish)		1	4 (1)			5
cf. <u>Ictalurus melas</u> (black bullhead)			5 (3)			5
cf. <u>Micropterus</u> sp. (bass)			1			1
indeterminate fish		4 (1)			1	5
-----						
Amphibians						
Caudata (salamanders)				2		2
Anura (toads and frogs)		3	16	24		43
<u>Bufo</u> sp. (toad)			1			1
<u>Rana</u> sp. (frog)		1		3		4
-----						
Reptiles						
Emydidae (box and water turtles)		9 (4)				9
<u>Terrapene</u> sp. (box turtle)		8 (3)	4 (1)			12
<u>Terrapene ornata</u> (ornate box turtle)						
Serpentes (snakes)		22 (6)	28		1	51
-----						
Birds						
cf. <u>Branta canadensis</u> (Canada goose)		1				1
<u>Tympanuchus cupido</u> (greater prairie chicken)			1			1
Rallidae (American coot, rails)		1 (1)				1
Passeriformes (perching birds)				1		1
indeterminate bird		4 (1)	6	4		14

Note: Burned specimens indicated parenthetically.

\* Rodent burrow



Table 4 . Identified vertebrate specimens, site 11CT385 - concluded.

Taxon	Test 1	Feature 1			Feature	To- tal
	Lv 3	Lv 1	Lv 2	Lv 3	4	
Mammals						
<u>Sylvilagus floridanus</u> (eastern cottontail)			4 (4)	1 (1)		5
Sciuridae (squirrels)		1				1
<u>Sciurus sp.</u> (gray/fox squirrel)		1 (1)	1			2
Cricetidae (rats and mice)			1			1
<u>Odocoileus virginianus</u> (white-tailed deer)	1		1			2
indeterminate mammal		2		2		4
Total Specimens	1	58	74	37	2	172

Note: Burned specimens indicated parenthetically.

APPENDIX D  
Correspondence

HISTORIC PRESERVATION AGENCY  
OLD STATE CAPITOL BUILDING  
SPRINGFIELD, ILLINOIS 62701  
217/785-4512

August 28, 1985

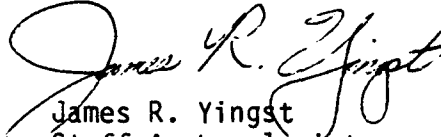
Mr. Michael Sirico  
American Resources Group, Ltd.  
127 North Washington  
Carbondale, IL 62901

Re: Survey Information for Carlyle Reservoir

Dear Mr. Sirico:

The enclosed copies show those areas for which you requested information. Obviously, our files are incomplete. IAS site file information is available only from the Illinois Archaeological Survey; I suggest that you contact them personally.

Sincerely,

  
James R. Yingst  
Staff Archaeologist

JRY:lc  
Enclosures



# ILLINOIS ARCHAEOLOGICAL SURVEY

109 DAVENPORT HALL

UNIVERSITY OF ILLINOIS  
607 SOUTH MATHEWS AVENUE

URBANA, ILLINOIS 61801

Cooperating Institutions:  
University of Illinois  
Southern Illinois University  
Illinois State Museum

May 28, 1985

Mr. Michael W. Sirico  
American Resources Group, Ltd.  
127 North Washington  
Carbondale, IL 62901

Dear Mr. Sirico:

Thank you for your letter of May 14 and enclosure of IAS site forms pertaining to a Phase I project with the St. Louis Office of the COE.

Enclosed is a list of IAS numbers for the 13 site forms you submitted.

Cordially yours,

  
Charles J. Bareis  
Secretary-Treasurer

CJB/jlm

Enclosure

cc: M. Records

<u>ARG Site Designation</u>	<u>IAS Site #</u>	<u>Comments</u>
Area 7-Locale iii	11-Ct-383	
Area 3-Locale vii	11-Ct-384	
Area 3-Locales i, ii	11-Ct-385	
Area 5-Locales i-iv, viii	11-Ct-386	
Area 2-Locales i, iv	11-Ct-375	this site falls within the previously defined boundaries for Ct-375
Area 2-Locale ii	11-Ct-364	this site falls within the previously defined boundaries for Ct-364
Area 4-Locale ii	11-Ct-387	
Area 5-Locales vi, vii	11-Ct-309	this site falls within the previously defined boundaries for Ct-309
Area 7-Locales xvi, xviii	11-Ct-388	
Area 7-Locale v	11-Ct-382	this site falls within the previously defined boundaries for Ct-382
Area 7-Locale xii	11-Ct-83	this site falls within the previously defined boundaries for Ct-83
Area 7-Locale xi	11-Ct-389	
Area 7-Locale i	11-Ct-390	

APPENDIX E  
Scope of Work

## SCOPE OF WORK

Contract No. DACW43-84-D-0085, Delivery Order No. 4  
Cultural Resource Compliance  
Carlyle Lake Shoreline Erosion Control

### 1. General.

1.1 Scope. The work to be accomplished by the Contractor consists of furnishing all labor, plant, and equipment necessary to conduct intensive cultural resource survey and shovel testing, and to conduct National Register evaluation(s) and effect assessment(s) on cultural properties discovered thereby, at selected land parcels at Carlyle Lake, and to furnish a written report thereon, all as set forth in this Scope of Work. All work shall be performed to the satisfaction of the Contracting Officer, or his authorized representative (C.O.R.).

1.2 Contracting Officer. The term "Contracting Officer" means the person executing this contract on behalf of the Government, and any other officer or civilian employee who is properly designated Contracting Officer; and the term includes, except as otherwise provided, the authorized representative of a Contracting Officer acting within the limits of their authority.

1.3 Safety. Equipment used in the performance of this delivery order shall conform with the safety requirements set forth in Corps of Engineers Manual EM 385-1-1 entitled, "Safety and Health Requirements" and supplements thereto, copies of which are available from the Carlyle Lake Management Office.

1.4 Work Period. The work period is 1 February 1985 or the date of this award, whichever is later, through 30 September 1985.

1.5 Contract Area. The contract area is located at Carlyle Lake, in Clinton County, Illinois, and is comprised of 16 small land parcels located at and near Boulder, Coles Creek, Lake Villa, and Lakeside Campground.

2. Government-Furnished Information. The Government will furnish, to the Contractor, the following items: Maps, drawings, and aerial photos needed to identify the tracts to be intensively surveyed; St. Louis District Report Format Guidelines; St. Louis District Title Page Format; Guidelines for Requesting Determinations of Eligibility; National Register nomination forms, and wire survey flags.

3. Rights of Entry. The Government will secure, for the Contractor, rights-of-entry onto all non-federally owned lands included in this study, for the purposes of carrying out the activities called for in this Scope of Work. Entry onto Federal property will be at locations approved by the C.O.R.

4. Work to be Performed by the Contractor. The tasks described in this Scope of Work will be conducted at each of sixteen (16) tracts of land, which together comprise 16 hectares (40 acres). The tracts are shown on the government-furnished maps and aerial photos. Prior to actual commencement of this work, the Contractor shall consult the National Register of Historic Places and its supplements, and the Illinois State Historic Preservation Office, for the purpose of determining whether any previously-known cultural properties exist in the project area. These consultations shall be documented in the Survey Report, the Draft Report, and the Final Report (Paragraphs 4.3, 5, and 6, below).

4.1 Intensive Survey. For the purposes of this Scope of Work, a 100% pedestrian survey is defined as one in which surveyor(s) walk parallel transects spaced approximately 5 meters apart over the entire tract. Only cultivated fields and selected shoreline areas will be surveyed. The total area to be intensively surveyed as defined in the paragraph is 30 acres. (26 acres ag fields, 4 acres shoreline) (See 4.2.1 below) The survey shall be sufficient to determine the number and extent of prehistoric and/or historic cultural properties visible at the shoreline and/or on the surface of each tract. This procedure shall include recordation of each identified property using Illinois State Archaeological Survey forms, and one random surface collection at each identified site.

4.2 Shovel Testing. A series of shovel tests shall be excavated at all tracts referenced above (Paragraph 4). The purpose of these tests will be to determine whether any artifacts, features, and/or buried soil horizons are present but not detectable at the surface. The testing frequency shall be based on a 10-meter grid. The dimensions of each shovel test unit shall be 30 cm. square by 45 cm. deep or 10 cm. below the base of the plow zone, whichever comes first. Fill from every fourth shovel test unit shall be screened through 1/4 inch hardware mesh. Only noncultivated areas are to be shovel tested. The total area to be tested, as defined in this paragraph, is 4 hectares (10 acres). Completed shovel test transects shall be backfilled and flagged for inspection. Flagging shall be provided by the government.

4.2.1 Work Areas

Tract 1	1.25 acres, ag field	(Survey)
Tract 2	1.29 acres, fallow or pasture-Contiguous	(Shovel Test)
Tract 3	0.76 acres, ag field-Contiguous	(Survey)
Tract 4	1.74 acres, ag field-Contiguous	(Survey)
Tract 5	1.14 acres, ag field-Contiguous	(Survey)
Tract 6	0.75 acres, half ag & half timber-Contiguous	(Survey/Shovel Test)
Tract 7	1.15 acres, half ag & half timber	(Survey/Shovel Test)



Lake Villa		
Revetment	900 feet of shoreline survey (.5 acres)	(Survey)
South Boulder		
Revetment	1400 feet of shoreline survey (1 acre)	(Survey)
North Boulder		
Revetment	3400 feet of shoreline survey (2 acres)	(Survey)
Tract 11	6.66 acres, ag field w/about 2-1/2 ac timber	(Survey/Shovel Test)
Tract 12	3.33 acres, ag field-Contiguous	(Survey)
Tract 13	3.80 acres, grass w/scrubby timber-Contiguous	(Survey)
Tract 14-15	6.81 acres, ag field w/treeline (about 1 acre)	(Survey/Shovel Test)
Tract 16	1.28 acres, ag field	(Survey)
Tract 17	3.58 acres, timber	(Shovel Test)
Tract 18	4.27 acres, residential or 600 feet shoreline (revetment)	(Survey)

4.3 Survey Report. The remainder of this Scope of Work refers just to those cultural properties that are previously reported or are discovered to exist in the 16 tracts, through records search, intensive survey, or shovel testing. The Contractor will be required to conduct random surface collection of diagnostic artifacts (Paragraph 4.1) and laboratory analyses of such collection(s) (Paragraph 4.6, below) for all cultural properties; however, the Contractor will be required, under this Scope of Work, to conduct evaluative test excavations (Paragraph 4.4, below) only at those cultural properties at which the C.O.R. determines such work is necessary and feasible. Prior to undertaking evaluative test excavations, the Contractor shall report the results of survey and shovel testing to the C.O.R. This Survey Report shall be in the form of a brief description of each identified property, including locational data, sketch map(s) of each cultural property, U.S.G.S. topographic map(s) showing location and extent of each cultural property, and fully completed site forms. The survey report will ultimately become a chapter of the draft report. The choice of those cultural properties on which evaluative test excavations are to be conducted, and the amount of excavation to be done, will be made by the C.O.R. following review of the Survey Report.

4.4 Evaluative Test Excavations. Test excavations shall provide data sufficient to enable a determination of any tested site's eligibility for listing on the National Register of Historic Places. Test units shall be centered on shovel test holes in which artifacts or features have been detected or, in the absence of "positive" shovel test units, shall be located as specified by the C.O.R. The standard test excavation unit shall be 2 by 2 meters. One solid core sample shall be removed from the base of one test unit

per site and shall extend to a depth of 2 meters below the last evidence of a cultural living surface. The use of a hand operated soil corer (2 cm diameter) is recommended for the removal of this sample. The composition of these core samples shall be discussed in the draft and final reports as part of the Test Excavations chapter. Where test excavations result in finding no cultural deposition, "last evidence" will be defined as the base of the plow zone, or, in the absence of same, the surface. Vertical excavation levels shall coincide with distinctly natural or cultural strata, or where these are absent, shall be arbitrary levels not more than 10 centimeters thick. All diagnostic artifacts and features encountered will be mapped, plotted, and photographed in situ. Photographs shall be for both black and white prints and color slides (see Paragraphs 6f, 6g below). Each photograph will show north arrow, scale, site identification, and grid location. Planview and profile maps of soil strata, features, and artifact distributions shall be completed at the base of each successive excavation level. Map scale shall be 1:20. After they are mapped and photographed, all features or portions thereof exposed in the test excavation unit shall be completely excavated, and artifacts shall be recovered. A 5 liter sample of fill from each feature shall be taken for floatation. The amount of fill floated shall be five liters or the entire feature, whichever volume is smaller.

4.5 Evaluation Report. After completing evaluative test excavations, the Contractor shall report their results to the C.O.R. This report shall include a discussion of each site's apparent eligibility for listing on the National Register, based on evidence obtained during survey and testing. The Evaluation Report will ultimately become a chapter in the Draft Report.

4.6 Lab Procedures. Unless otherwise specified, lab procedures will conform to the Center for American Archeology Laboratory and Fieldwork Procedure Manual, Kampsville, Illinois, 1980. Artifacts collected during survey, shovel testing, and evaluative test excavation activities shall be cleaned, permanently labeled and catalogued according to these lab procedures. The Contractor shall analyze these collections in order to determine each site's temporal affiliation and horizontal surface distribution. All artifacts shall be separated into various material categories, then subdivided into smaller, functional and stylistic categories. Frequency distributions shall be generated and these shall be quantitatively assessed in a statistical manner. Feature fill samples (Paragraph 4.4) shall be floated. For some collections, special studies shall be required, for example:

a. Lithic analysis - this shall be a description of morphological, functional, and stylistic attributes and the identification of raw material. Analysis shall also determine intrasite and local relationships;

b. Ceramic analysis - this shall be description of morphological and stylistic attributes, and shall also identify intrasite and local relationships;

c. Floral analysis - a paleobotanist shall identify any floral remains collected or recovered through floatation;

d. Faunal analysis - a paleo-zoologist, or zooarchaeologist, shall identify any faunal remains collected or recovered by floatation;

e. Analysis of human skeletal remains - a physical anthropologist shall conduct the analysis of all human remains. The analysis shall be an identification of age, sex, and observable pathologies. If burials are encountered, their temporal and spatial relationships shall be described, and an explanatory discussion shall be made.

4.7 Curation of Material. The final report shall contain a statement indicating the exact location of all materials and records resulting from this contract work. This statement shall include the name and address of the curatorial building, the storage room number, and the rack, shelf or cabinet number where this material is stored. Containers in which feature fill and/or artifacts are stored shall be clearly labeled "Property of the U.S. Government, St. Louis District, Corps of Engineers." Minimum standards for the composition and characteristics of these containers shall be provided by the Government.

4.8 Documentation of National Register Evaluation. For all cultural properties, regardless of whether or not they are tested, an assessment shall be made of their eligibility for listing on the National Register of Historic Places. The assessment shall be made by the Contractor according to the Criteria for Evaluation (Paragraph 2) relative to the information obtained during survey, shovel testing, and (if applicable) evaluative test excavation. Statements of eligibility or ineligibility shall be complete and explicit. They shall describe each property as it relates to a broad historical, architectural, archaeological, or cultural context, and shall utilize cultural resource data previously collected at and near Carlyle Lake. Where it is the Contractor's assessment that a particular property is eligible for listing on the National Register, the Contractor shall structure the description of such property according to the Guidelines for Requesting Determinations of Eligibility (see Paragraph 2), and shall address all subparts of those Guidelines in complete detail. Where it is the Contractor's assessment that a particular property is not eligible for listing on the National Register, it shall nevertheless be the Contractor's responsibility to document completely the results of survey, shovel testing, and (if applicable) evaluative test excavation, to analyze and report the collected materials, and to provide a complete and detailed explanation of the finding that such property is ineligible. All statements of eligibility shall be reviewed by the C.O.R. (see Paragraph 11.7), by the State Historic Preservation Office, and, if appropriate, by the Keeper of the National Register.

4.9 Conferences. Conferences shall be held four times during the period of this delivery order. The initial conference shall be a Post-Award Meeting at which the Contractor's principal investigator and field supervisor, and the C.O.R., shall coordinate plans for the field operation and performance of the Scope of Work. The second and third conferences shall be attended by the same

personnel, shall be held after the C.O.R.'s review of the Survey Report and the Evaluation Report, respectively. These conferences shall define the Contractor's responsibilities pursuant to Paragraphs 4.4, 4.6, and 4.8, and shall include any necessary discussion regarding revisions in schedule and/or methodology. The fourth conference shall take place after the conclusion of laboratory analysis. This conference shall be for the purposes of inspecting and monitoring curation of collected materials. The first, second and third conferences shall be held in the St. Louis District office, the fourth conference shall be held at the UMSL curation facility.

5. Draft Report. The Contractor shall submit a draft report which shall be an accurate representation of the final report. The draft (and therefore the final report) shall report the results of intensive survey, shovel testing, and any evaluative test excavation(s) undertaken, and shall also report the results of laboratory analysis. The draft (and the final) report shall include photographs and/or graphics which shall accurately show the locations of all areas surveyed, the locations of shovel test units, and the locations of any cultural properties discovered by either method; which shall show the locations of any evaluative test excavation units; and which shall show details of features, profiles, artifacts, or any other cultural evidence. Report shall discuss how the results of this work will contribute to the present understanding of Illinois culture history, particularly as it relates to the Middle Kaskaskia River Valley. The draft report shall be typed and double spaced, and three (3) copies shall be provided to the C.O.R. All pages shall be numbered. Photographs, plates, drawings, and other graphics shall appear in the same quality, size, format, and location in the draft report as they will be in the final report.

6. Final Report. The final report shall incorporate review comments made on the draft report and submitted to the Contractor by the C.O.R. The final report shall be compiled and reproduced according to the following specifications:

a. Completed site forms shall be submitted for each site identified during survey, records search, and/or shovel testing activities. U.T.M. coordinates and legal locations of each site shall be reported on the site forms, but not elsewhere in the report. The completed site forms shall be included as an appendix to the original copy of the final report, but shall not be included in the reproduced copies. The appendix shall also include U.S.G.S. topographic maps (1:24,000 scale) and government-furnished project maps (see Paragraph 2), all of which shall show the exact location and extent of each identified cultural property. These maps shall not appear elsewhere in the report.

b. An abstract suitable for publication in Contract Abstracts shall be prepared, and shall be included at the front of each copy of the final report. The abstract shall consist of a brief (not to exceed one typewritten, single-spaced page) summary useful for informing the technically oriented professional public of what the author considers to be the results and contributions of the investigation.

c. The final report shall be typed and single-spaced, and twenty-five (25) copies shall be provided to the C.O.R.

d. The title page shall be organized in a manner consistent with the St. Louis District Title Page Format (see Paragraph 2).

e. While the C.O.R. is reviewing the Contractor's draft report, the C.O.R. will prepare report covers for the final report and will forward these to the Contractor with draft comments. The Contractor shall be responsible for binding the final report in these covers, using Plastic Spiral Binding.

f. Reproduction quality 8x10 inch photographs shall be provided which show details of field conditions, features, profiles, artifacts (especially diagnostic or functionally significant artifacts), or other evidence of past cultural activity. For the purpose of reproduction, these shall be black and white half tone prints.

g. A photographic log of annotated 35mm slides, showing each phase of lab and fieldwork in progress, shall be included as an appendix with the Final Report original.

h. A full set of reproducible drawings and maps (but note the exception stipulated in Paragraph 6a) shall be included with the final report original and reproduced in its copies. All drawings and maps shall include title blocks showing title, scale, legend, and (where applicable) magnetic and geographic north.

i. All drafting shall be accomplished in ink on stable-base drafting film. Drafting ink shall be compatible with stable-base film.

j. Either mechanical or freehand lettering may be used but shall be in accordance with good drafting practice. In no case shall lettering height be less than 1/8 inch. Freehand lettering will only be acceptable for recording data on base maps.

k. Pencil shading on finished drawings will not be accepted. Shading shall be accomplished with hatching or preprinted "stick-on" screens. Lettering shall not be obscured with hatching or screening. Hatching shall be on the reverse side of the drawing.

7. Protection of Natural and Historic Features. The Contractor shall be responsible for all damages to persons and property which occur in connection with the work and services under this contract, without recourse against the Government. The Contractor shall provide maximum protection, take every reasonable means, and exercise care to prevent damage to existing historic structures, roads, utilities, and other public or private facilities. Special attention shall be given the historic structures and natural and landscape features of the area, and special care shall be taken to protect these elements in their surroundings. The Contractor shall provide suitable protection for vegetation and facilities adjacent to work areas.

8. Restoration. The Contractor shall restore to the satisfaction of the Contracting Officer at no additional cost to the Government any damage to any Government or private property. This shall include grading, fertilizing, and seeding of excavated areas.

9. Publicity. The Contractor shall not release any material for publicity without the prior written approval of the Contracting Officer. It is not the Contracting Officer's intent to restrict in any way the Contractor's desire to publish in scholarly or academic journals.

10. Inspection and Coordination. The Contracting Officer, or his authorized representative, may at all reasonable times inspect or otherwise evaluate the work being performed hereunder and the premises on which it is being performed. If any inspection or evaluation is made by the Government on the premises of the Contractor or any subcontractor, the Contractor shall provide and shall require his subcontractors to provide all reasonable facilities and assistance for the safety and convenience of the Government representatives. All inspections and evaluations will be performed in such a manner as will not unduly delay the work. Close coordination shall be maintained between the Contractor's principal investigator and the Contracting Officer's representative to insure that the Government's best interest is served. \_\_\_\_\_

11. Schedule of Work.

11.1 Post-Award Meeting. After the issuance of the delivery order, the Contractor (including field and laboratory supervisory personnel and the principal investigator) shall meet with the C.O.R. and other Government representative(s) as appropriate. This conference will take place within 7 work days after the date of the delivery order. At this meeting, the C.O.R. will name inspector(s) and other Government contacts, as appropriate.

11.2 Intensive Survey and Shovel Testing. This phase of the fieldwork shall commence not later than 7 calendar days after the post-award conference. All field work related to this item shall be completed within 21 calendar days after commencement.

11.3 Survey Report. This item shall be submitted within 5 calendar days after completion of the intensive survey and shovel testing. Within 5 work days after the C.O.R. receives the Survey Report, a decision will be made by the C.O.R. regarding what further work, if any, is to be conducted. A second conference (Paragraph 4.9) will advise the Contractor of this decision. If no further work is considered necessary, then fieldwork will be considered concluded at this point.

11.4 Evaluative Test Excavations. If any work under this item is determined necessary, then a schedule will be established at the second conference (Paragraph 11.3).

11.5 Evaluation Report. If any evaluative test excavations are determined necessary, the Contractor shall submit the Evaluation Report (Paragraph 4.5)

within 5 work days after the completion of evaluative test excavations. Otherwise, the requirements for an Evaluation Report will be exempted. If an Evaluation Report is made, it will be reviewed by the C.O.R., who will then call the third conference (Paragraph 4.9).

11.6 Laboratory Analysis and Preparation of Draft Report. A schedule for these two items will be established at the third conference (Paragraph 11.5). However, if fieldwork is concluded as per Paragraph 11.4, the Contractor shall submit the draft report within 30 calendar days after the second conference.

11.7 Final Report. If field work is concluded as per Paragraph 11.4, the C.O.R. will review the draft report and submit comments to the Contractor within 20 work days. In such a case, the Contractor shall submit the final report within 20 calendar days after receiving these comments. However, if any evaluative test excavations are determined necessary, a schedule for the C.O.R.'s review of the draft, and for the completion of the final report, will be established at the third conference (Paragraph 11.5).

12. Time Extensions: In the event these schedules are exceeded due to causes beyond the control and without the fault or negligence of the contractor, this delivery order will be modified in writing and the delivery order completion date will be extended one (1) calendar day for each day of delay.

## Scope of Work

Contract No. DACW43-85-D-0085, Delivery Order No. 6  
Carlyle Lake Cultural Resource Data Sampling

### 1. GENERAL.

1.1 Scope. The work to be accomplished by the Contractor consists of furnishing all labor, plant, and equipment necessary to conduct data sampling and National Register evaluation on known cultural properties at selected land parcels at Carlyle Lake, and to furnish a written report thereon, all as set forth in this Scope of Work. All work shall be performed to the satisfaction of the Contracting Officer, or his authorized representative (C.O.R.).

1.2 Study Manager. After issuance of the delivery order, the Study Manager shall be Mr. Terry Norris of the St. Louis District Office, Rm 841, 210 N Tucker Blvd, telephone 314-263-5317. All correspondence pertinent to this delivery order, including invoices or requests for payment, will be addressed to the Study Manager, who will review these and forward them to the C.O.R. All decisions pertaining to field logistics, inspection, and performance of this delivery order, will be under the authority of the Study Manager.

1.3 Safety. Equipment used in the performance of this delivery order shall conform with the safety requirements set forth in Corps of Engineers Manual EM 385-1-1 entitled, "Safety and Health Requirements" and supplements thereto, copies of which are available from the Lake Shelbyville Management Office.

1.4 Work Period. The work period is from the date of this award, through 4 November 1985.

1.5 Contract Area. The contract area is located at Carlyle Lake in Clinton County in Illinois. It is comprised of 5 previously identified archaeological sites, namely CT-386, CT-309, CT-385, CT-364, and CT-389. Exact locations are shown on the government-furnished maps (see Paragraph 2).

2. GOVERNMENT FURNISHED INFORMATION. The Government will furnish, to the Contractor, the following items: Maps needed to identify the sites to be tested; Criteria for Evaluation; St. Louis District Report Format Guidelines; St. Louis Title Page Format; Guidelines for Requesting Determinations of Eligibility; and National Register nomination forms.

3. RIGHT OF ENTRY. The Government will secure, for the Contractor, rights-of-entry onto all non-federally owned lands included in this study, for the purposes of carrying out the activities called for in this Scope of Work. Entry onto Federal property will be at locations approved by the C.O.R.



4. Evaluative Test Excavations. Test excavations shall provide data sufficient to enable a determination for any tested site's eligibility for listing on the National Register of Historic Places.

#### 4.1 Fieldwork Schedule

Field work shall be conducted at the following sites in the order of priority listed below:

	<u>Site No.</u>	<u>Extent of Excavation (planview)</u>
1st priority	11-CT-386	62 (These units should be located between 1 to 2 meters land side of the cutbank edge. Not accessible by machines.
2nd priority	11-CT-309	4m2 Not accessible by machine
3rd priority	11-CT-385	6m2 Accessible by machine
4th priority	11-CT-364	4m2 Not accessible by machine
5th priority	11-CT-389	4m2 Accessible by machine

#### 4.2 Bankline Profile Excavation

One portion of 11-CT-389 was exposed in a vertical cutbank. This cutbank is to be shovel scraped, troweled and mapped per specifications in Paragraph 4.3 below. All artifacts recovered during excavations shall be analyzed, cataloged and stored per Paragraphs 4.5 & 4.6 below. Ten meters of the cutbank shall be profiled. The location of this excavation shall be specified by the C.O.R. and shall correspond to the area of highest artifact concentration or organic anomalies.

#### 4.3 Test Unit Excavations

Test units shall be centered on shovel test holes in which artifacts or features have been detected or, in the absence of "positive" shovel test units, shall be located as specified by the C.O.R. The standard test excavation unit shall be 2 by 2 meters or machine excavated unit of comparable size.

Vertical excavation levels shall coincide with distinctly natural or cultural strata, or where these are absent, shall be arbitrary levels not more than 10 centimeters thick. All diagnostic artifacts and features encountered will be mapped, plotted, and photographed in situ. Photographs shall be for both black and white prints and color slides (see Paragraphs 6f, 6g below). Each photograph will show north arrow, scales, site identification, and grid location. Planview and profile maps of soil strata, features, and artifact distributions shall be completed at the base

of each successive excavation level. Map scale shall be 1:20. After they are mapped and photographed, all features or portions thereof exposed in the test excavation unit shall be completely excavated, and artifacts shall be recovered.. A 5 liter sample of fill from each feature shall be taken for floatation. The amount of fill floated shall be five liters or the entire feature, whichever volume is smaller.

4.4 Monumentation and Contour Mapping. At each of the 5 sites referenced in Paragraph 1.5, which following test excavating are judged by the C.O.R. to be eligible for inclusion in the National Register of Historic Places, the Contractor shall emplace a survey monument. These will be provided by the Government, and marked as specified by the Study Manager. The survey monuments shall be emplaced in locations not subject to disturbance due to shoreline erosion or to agricultural practice, and shall serve as reference points for contour maps of each site, which shall be made by the Contractor. Maps shall show the locations of site limits, the survey monuments, machine-excavated or hand-excavated test units, and exposed features. Contour interval shall not be greater than 50 cm, and individual readings on the same contour line shall be no more than 20 m apart.

4.5 Lab Procedures. Unless otherwise specified, lab procedures will conform to the Center for American Archeology Laboratory and Fieldwork Procedure Manual, Kampsville, Illinois, 1980. Artifacts collected during data sampling and evaluative test excavation activities shall be cleaned, permanently labeled and catalogued according to these lab procedures. The Contractor shall analyze these collections in order to determine each site's temporal affiliation and horizontal surface distribution. All artifacts shall be separated into various material categories, then subdivided into smaller, functional and stylistic categories. Frequency distributions shall be generated and these shall be quantitatively assessed in a statistical manner. Feature fill samples (Paragraph 4.2) shall be floated. For some collections, special studies shall be required for example:

a. Lithic analysis - this shall be a description of morphological, functional, and stylistic attributes and the identification of raw material. Analysis shall also determine intrasite and local relationships; .

b. Ceramic analysis - this shall be a decription of morphological and stylistic attributes, and shall also identify intrasite and local relationships;

c. Floral analysis - a paleobotanist shall utilize a volumetrically and statistically controlled sample to identify floral remains collected or recovered through floatation;

d. Faunal analysis - a paleo-zoologist, or zooarchaeologist, shall utilize a volumetrically and statistically controlled sample to identify faunal remains collected or recovered by floatation;

e. Analysis of human skeletal remains - a physical anthropologist shall conduct the analysis of all human remains. The analysis shall be an identification of age, sex, and observable pathologies. If burials are encountered, their temporal and spatial relationships shall be described, and explanatory discussion shall be made.

f. Radiocarbon dating - the Contractor shall collect and containerize all excavated materials that would be suitable for radiocarbon dating. Based on the provenience and information potential of any samples thus obtained, the C.O.R. will determine which samples (if any) are to be dated, and this delivery order will be modified accordingly.

4.6 Location and Access of Collected Material. The final report shall contain a statement indicating the exact location of all materials and records resulting from this contract work. This statement shall include the name and address of the storage building, the storage room number, and the rack, shelf or cabinet number where this material is stored. Containers in which feature fill and/or artifacts are stored shall be clearly labeled "Property of the U.S. Government, St. Louis District, Corps of Engineers." Minimum standards for the composition and characteristics of these containers shall be provided by the Government.

4.7 Documentation of National Register Evaluation. For all cultural properties an assessment shall be made of their eligibility for listing on the National Register of Historic Places. The assessment shall be made by the Contractor according to the Criteria for Evaluation (Paragraph 2) relative to the information obtained during evaluative test excavation. Statements of eligibility or ineligibility shall be complete and explicit. They shall describe each property as it relates to a broad historical, architectural, archaeological, or cultural context, and shall utilize cultural resource data previously collected at and near Lake Shelbyville. Where it is the Contractor's assessment that a particular property is eligible for listing on the National Register, the Contractor shall structure the description of such property according to the Guidelines for Requesting Determinations of Eligibility (see Paragraph 2), and shall address all subparts of those guidelines in complete detail. Where it is the Contractor's assessment that a particular property is not eligible for listing on the National Register, it shall nevertheless be the Contractor's responsibility to document completely the results of evaluative test excavations, to analyze and report the collected materials, and to provide a complete and detailed explanation of the finding that such property is ineligible. All statements of eligibility shall be reviewed by the C.O.R. (see Paragraph 12.4), by the State Historic Preservation Office, and, if appropriate, by the Keeper of the National Register.

4.8 Conferences. Conferences shall be held three times during the period of this delivery order. The initial conference shall be a Post-Award Meeting at which the Contractor's principal investigator and field supervisor, and the Study Manager, shall coordinate plans for the field operation and performance of the Scope of Work. The second conference shall

be attended by the same personnel, and shall be held after completion of fieldwork. This conference shall define the Contractor's responsibilities pursuant to Paragraphs 4.4 and 4.6 and shall include any necessary discussion regarding revisions in schedule and/or methodology. The third conference shall take place after the conclusion of laboratory analysis. This conference shall be for the purposes of inspecting and monitoring storage of collected materials.

5. DRAFT REPORT. The Contractor shall submit a draft report which shall be an accurate representation of the final report. The draft (and therefore the final report) shall report the results of data sampling and evaluative test excavation and shall also report the results of laboratory analysis. The draft (and the final) report shall include photographs and/or graphics which shall accurately show the locations of excavation units; and which shall show details of features, profiles, artifacts, or any other cultural evidence. The draft report shall be typed and double-spaced, and three (3) copies shall be provided to the Study Manager. Copies shall be of such quality that they can easily be reproduced on a plain bond copier. Dot matrix print is unacceptable. All pages shall be numbered. Photographs, plates, drawings, and other graphics shall appear in the same quality, size, format, and location in the draft report as they will be in the final report.

6. FINAL REPORT. The final report shall incorporate review comments made on the draft report and submitted to the Contractor by the C.O.R. The final report shall be compiled and reproduced according to the following specifications:

a. An abstract suitable for publication in Contract Abstracts shall be prepared, and shall be included at the front of each copy of the final report. The abstract shall consist of a brief (not to exceed one typewritten, single-spaced page) summary useful for informing the technically-oriented professional public of what the author considers to be the results and contributions of the investigation.

b. The final report shall be typed and single-spaced and twenty-five (25) copies shall be provided to the C.O.R. Copies shall be of such quality that they can easily be reproduced on a plain bond copier. Dot matrix print is unacceptable.

c. The title page shall be organized in a manner consistent with the St. Louis District Title Page Format (see paragraph 2).

d. The C.O.R. will prepare report covers for the final report and will forward these to the Contractor with draft comments. The Contractor shall be responsible for binding the final report in these covers, using Plastic Spiral Binding.

e. Reproduction quality 8 x 10 inch photographs shall be provided which show details of field conditions, feature, profiles, artifacts (especially diagnostic or functionally significant artifacts), or other evidence of past cultural activity. For the purpose of reproduction, these shall be black and white half-tone prints.

f. A photographic log of annotated 35mm slides, showing each phase of lab and fieldwork in progress, shall be included as an appendix with the Final Report original. This will include photos of all features.

g. A full set of reproducible drawings and maps shall be included with the final report original and reproduced in its copies. All drawings and maps shall include title blocks showing title, scale, legend, and (where applicable) magnetic and geographic north.

h. All drafting shall be accomplished in ink on stable-base drafting film. Drafting ink shall be compatible with stable-base film.

i. Either mechanical or freehand lettering may be used but shall be in accordance with good drafting practice. In no case shall lettering height be less than 1/8 inch. Freehand lettering will only be acceptable for recording data on base maps.

j. Pencil shading on finished drawings will not be accepted. Shading shall be accomplished with hatching or preprinted "stick-on" screens. Lettering shall not be obscured with hatching or screening. Hatching shall be on the reverse side of the drawing.

7. PROTECTION OF NATURAL AND HISTORIC FEATURES. The Contractor shall be responsible for all damages to persons and property which occur in connection with the work and services under this contract, without recourse against the Government. The Contractor shall provide maximum protection, take every reasonable means, and exercise care to prevent damage to existing historic structures, roads, utilities, and other public or private facilities. Special attention shall be given the historic structures and natural and landscape features of the area, and special care shall be taken to protect these elements in their surroundings. The Contractor shall provide suitable protection for vegetation and facilities adjacent to work areas.

8. RESTORATION. The Contractor shall restore to the satisfaction of the Contracting Officer at no additional cost to the Government any damage to Government or private property. This shall include grading, fertilizing and seeding of areas excavated or otherwise disturbed by the contractor. Kentucky 31 fescue seed shall be applied at a rate of 150 lbs. per acre and 12-12-12 fertilizer shall be applied at a rate of 200 lbs. per acre. Seed and fertilizer will be provided by the Government.

9. PUBLICITY. The Contractor shall not release any material for publicity without the prior written approval of the Contracting Officer. It is not the

Contracting Officer's intent to restrict in any way the Contractor's desire to publish in scholarly or academic journals.

10. INSPECTION AND COORDINATION. The Contracting Officer, or his authorized representative, may at all reasonable times inspect or otherwise evaluate the work being performed under this contract and the premises on which it is being performed. If any inspection or evaluation is made by the Government on the premises of the Contractor or any subcontractor, the Contractor shall provide and shall require his subcontractors to provide all reasonable facilities and assistance for the safety and convenience of the Government representatives. All inspections and evaluations will be performed in such a manner as will not unduly delay the work. Close coordination shall be maintained between the Contractor's principal investigator and the Contracting Officer's representative to insure that the Government's best interest is served.

11. SCHEDULE OF WORK.

12.1 Post-Award Meeting. After the issuance of the delivery order, the Contractor (including field supervisory personnel and the principal investigator) shall meet with the Study Manager and other Government representative(s) as appropriate. This conference will take place within 7 calendar days after the date of the delivery order. At this meeting, the Study Manager will name inspector(s) and other Government contacts, as appropriate. This meeting will be at the Carlyle Lake Management Office.

12.2 Fieldwork. Fieldwork shall commence no later than 7 calendar days after the post-award conference. All work related to this item shall be completed within 30 calendar days after commencement.

12.3 Draft Report. The Contractor shall submit 3 unbound copies of the draft report within 45 calendar days after completion of fieldwork.

12.4 Final Report. The C.O.R. will review the draft report and submit comments to the Contractor within 15 calendar days. The Contractor shall submit the final report original, unbound, and 25 bound copies of the final report, within 15 calendar days after receiving these comments and shall transmit requests for Determinations of Eligibility for listing on the National Register to the SHPO and to the Keeper of the National Register, as appropriate.

13. TIME EXTENSIONS. In the event these schedules are exceeded due to causes beyond the control and without the fault or negligence of the Contractor, this delivery order will be modified in writing and the delivery order completion date will be extended one (1) calendar day for each day of delay.

APPENDIX F

Request for Determination of Eligibility  
Documentation, 11-Ct-385

On File with the St. Louis Corps of Engineers